Part 1

The Journal of the American Medical Association

VOL. XXXVI. CHICAGO, ILLINOIS, JANUARY 5, 1901. No. 1.

Address.

SPECIALTIES AND SPECIALISTS.*

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Specialism is a significant feature of our times and by no means confined to medicine. Few eminent lawyers undertake to practice all phases of jurisprudence; many devote their efforts to one distinct department only. Thus we have the criminal, the patent, the real-estate, the probate, the mercantile, the corporation, and, lastly, but not of the least interest to some physicians, the collection lawyer. Few painters have achieved world-wide fame unless by constant application to a single purpose. Rosa Bonheur and Verboeckhoven have never tired of depicting animals, the Barbizon school has revealed to us the beauties of rural life, Mezdag is known only by his marine pictures, Israel by his frugal interiors, Meissonier by his war scenes, Lenbach and Whistler by their realistic portraits, our own Innes by his inimitable landscapes. In all domains of mental energy, in commerce and the industries, we find specialties. Who can wonder then that the phenomenal development of medicine during the past fifty years has of necessity led, not to its division into as many independent departments as there are different organs in the body, but—comparing it to a tree—to a healthy and strong development of all its branches to a degree where some of them, while still drawing their life-blood from the same old roots, and while still firmly attached to the same old trunk, have grown to imposing dimensions. Specialties in medicine are, therefore, not the arbitrary, capricious, artificial products of the respective specialists, but the legitimate result of increased medical knowledge, the inevitable and irrepressible consequence of evolution.

Some specialties have long ago reached their age of maturity and few of you will question their standing and title to-day. In the majority of good medical schools, here and abroad, there have been for a long time separate chairs of ophthalmology and otology, gynecology, laryngology, neurology and psychiatry, pediatrics and dermatology, although examinations in all these branches were not always obligatory for obtaining a degree. Advisedly I do not mention obstetrics here, for a long time recognized by a special chair, for it is rare that practice is confined to it exclusively; nor would it be proper to call surgery a specialty. Of more recent date are the specialties of rhinology, orthopedic surgery, and genito-urinary surgery. In practice, but hardly in the regular degree-conferring colleges, we have proctology, as it lately has been baptized—not to mention the title of orificial surgery—gastrology, and abdominal surgery. To those of you who in the near future may find an overcrowded state of affairs in most of the specialties just enumerated, I would suggest a few good openings, as follows: Glossology (diseases of the tongue), hepatology (diseases of the liver), nephrology, splenology, pancreatology, thyroidology, onychology, (diseases of the nails), etc., ad libitum. The general public, of course, is constantly creating all sorts of specialists, as for instance the specialist for rheumatism, for appendicitis, for intubation, the fever and the catarrh specialists; the complexion and the hair specialist, and so on. Let us not forget one important species, the specialist for everything—the man who never turns anybody from his door, who treats anything and everybody. As varieties of this marvelous category, we might mention the osteopath, the "Christian scientist," the Dowieite, vitopath, hydropath, electropath, and other charlatans.

In view of the tremendous array of specialties just alluded to, some of you might well ask if there is anything left for the general practitioner. To this I would answer: everything. Not only in the smaller communities, but even in the larger centers of population, the historic style of the well-trained, good, all-around, general practitioner will and must remain the backbone, or as my friend Patrick would call it, "the solid Muldoon," of the medical profession, and with the continued improvement in our colleges, this type should attain the highest order of perfection. The general practitioner ought never to collide with the *true* specialist, who, rather than antagonize him, should be his ally in times of need, clearing up a doubtful diagnosis, mapping out a successful line of treatment in difficult cases, always ready to support, never willing to supplant him. The general practitioner will always keep the management of acute diseases, and should be the trusted medical counselor of the household in everything pertaining to hygiene, sanitation, development of children, etc. He will attend to all normal confinements, but will be glad to have his responsibility shared by the expert obstetrician in cases of placenta previa, or face presentation. He will treat the majority of eye affections, but will leave cataract extraction and refined ophthalmoscopic diagnosis to the trained oculist. He will manage all sorts of throat troubles, be prepared for the use of antitoxin against diphtheria, be even ready to perform tracheotomy when emergency arises, but leave intralaryngeal operations and intubations to the skilled laryngologist. And so in all other departments of medicine. But the busy general practitioner will find little time for scientific research work and be content to watch the progress of medicine as an interested and intelligent observer. The bulk of the real work in the science and art of medicine has for years been and will always be done by the pathologist and the clinician respectively, which includes the specialist. And by work I do not mean the writing of journal articles, or the compilation of text-books, but investigation by means of microscope, chemical analysis, animal experimentation and methodical clinical observa-

* Address delivered at the Opening Exercises of Northwestern University Medical School, Oct. 2, 1900.

tion on large hospital material, and the publication of such work in appropriate scientific form. Herein I see before everything else, if there is at all need of it, a vindication of the specialties, which are too often unjustly arraigned and held to account for the doings and vagaries of their would-be votaries. The specialties are all right. The specialists are only too often all wrong. The rush to the specialties during the last two decades, particularly in the large cities, has been so impetuous that it naturally resulted in the establishment of a class of mediocre specialists, who often bring discredit on the whole institution of specialism. I have no hesitation in saying that we have too many specialists, but not enough good ones.

What are the criteria of the true, the ideal specialist? He should be a man with an excellent general preliminary education. This should even include a knowledge of the more important modern languages, an indispensable accomplishment for one who must follow the international medical literature of to-day. He should have had a broad, comprehensive medical training in college and hospital, particularly in pathology. In addition to this, he should have devoted, according to the line of work selected, from two to four years to his special studies, comprising clinical, literary and laboratory work. He should never lose the intimate contact with general medicine, and no matter how small the field of his special labors may be, he should always remain a physician. The true specialist will never become narrow, and I may later on have occasion to illustrate of at least one specialty the many bonds of union by which it is inseparably tied to general medicine. The true specialist can never afford to stop working scientifically. The continued wave of progress in medicine must be closely followed by him, lest he remain behind, and particularly if he should be a teacher we must expect him to be always at the front. In his practice the true specialist should before all be a reliable diagnostician. Acquaintance with the commoner diseases of any organ may safely be expected of any well-trained and fairly experienced general physician. But we have a right to demand from the specialist thorough and easy familiarity with rar and exotic affections also; in other words, in his rôle as a consultant, he should be an expert. Likewise, should he be fully at home in all therapeutic methods and measures pertaining to his specialty. I think it is perfectly fair to insist that a specialist should confine his practice strictly to his chosen department; and yet it is exceedingly difficult to avoid occasional—at least apparent—conflict with other fields. The neurologist finds himself daily confronted with cases requiring the fullest knowledge of the pathology and treatment of syphilis; the syphilographer again must as often be prepared to meet in his patients, nose and throat, eye and nerve disturbances. The throat specialist will find many of his cases to be complicated by bronchial and lung affections, and the oculist may trace many eye troubles to rheumatism, diabetes or other systemic derangements which call for his interference. In all such cases the specialist must show that he has not ceased to be a physician; he should not degrade himself to a mere tool in the hands of his professional constituents. Tact and judgment will, however, easily keep him from treading on the general practitioner's toes.

Shall I attempt to characterize the would-be, the poor or mediocre specialist? An ungrateful, perhaps an ungracious task. Look around you and see the man who is ever ready to present you his card whereon is inscribed "Practice limited to such and such diseases," who "makes a specialty" of this or that—a disgusting expression to me, by the way—who constantly talks to his friends of his cases and the increase of his income; who appears before medical societies to parade with his poorly observed and often misinterpreted cases; who uses every opportunity at such gatherings to get up and talk for no other purpose than to let his audience know that he, too, has seen cases of exactly the nature that the essayist has described, but that in his hands the drug recommended has been of no value, while a formula of his own or a specially devised instrument, which he forgets to describe, have uniformly proved successful; who, with a lot of others of the same genus, but engaged in different departments, forms a sort of a trust for the exchange of cases; and who often enough, let us be frank, holds out all sorts of inducements to general practitioners for the transfer of special cases; to whom his specialty is indeed naught but a milk cow. Such a man probably enters medical college with a firm determination of eventually "making a specialty" of a certain class of diseases. While in college he considers everything which is not directly related to his prospective special field, as irrelevant, gets through his medical course easily, about well enough to barely pass his examinations without being plucked. His sheepskin still damp from the signature of the faculty members, he at once goes abroad for special studies in Paris, London, Vienna. These studies are largely devoted to a minute investigation of the most famous cafés, restaurants, theaters and other places of amusement; a few special courses by privatdocents or assistants, given in a poorly understood foreign language, are however, usually taken along, by the way, as it were. Six or twelve months later, this perfect, newly-made specialist arrives home, where his friends have already been prepared by numerous letters of his wonderful attainments abroad, armed with instruments of the latest pattern, declaiming about the very most recent methods of treatment which he is now the only possessor of, and superciliously sneering at the old fogyish Dr. X, whose competitor he starts out to become. Soon enough he succeeds in buying a professorship in the Æsculapian College for Advanced Clinical Medicine, and what seems most remarkable, many members of the profession open their arms to that sort of medical luminary and shower patronage on him. Even soap bubbles rise up; for a time, at least. Do not consider these remarks as exaggerated or slanderous, but take them, I mean you students, as a timely warning. If you, freshmen, have come here with a specialistic bee buzzing in your ears, kill it at once. If you develop during your college studies a special inclination toward some particular branch of medicine, cultivate it as much as you may, without, however, neglecting any other work. Build a strong foundation for your future by earnest devotion to the fundamental studies, anatomy, physiology, chemistry, pharmacology, and lastly, but most important, pathology. You can never build this foundation too massive. Add as the next story of the structure, as it were, the principles of medicine and surgery. Then, if you choose, you may undertake to erect your specialty on the top floor. But this last part of your training for any chosen specialty can not be gotten in a regular medical college, and should not be expected from it. The teaching staff of a high-grade medical school nowadays must, of course, contain quite a number of specialists. You would not be willing to have the most excellent general practitioner lecture to you on neurology, eye diseases, or laryngology. But your teacher of any specialty, if he realizes his position and appreciates

your wants, will, with wise discretion, pick out for your instruction from the bewildering mass of material at hand, those subjects which you are most likely to meet in your future daily work. He will treat exhaustively the more common affections, mention without going into technical details the chief features of the rarer diseases, always maintaining the contact with general pathology, always pointing out the relationship to general medicine and surgery. Taught in this way, the study of the specialties in the college will help to broaden you, rather than to detract from your general medical education.

The step into a specialty may be made in various ways. The opinion frequently voiced that in order to become a good specialist one should have spent from five to ten years in general practice is justified in many respects. At the same time it will easily be admitted that two-years' work in a large hospital, going from one service to another, far outweighs the experience acquired in the former. Work in a hospital is, as a rule, more apt to be of a high scientific order, while busy general practice often leads to routine and from its very nature, the constant strain on mind and body unfits its follower for hard scientific work in one particular line. In what manner attendance on hundreds of cases of labor, pneumonia or typhoid fever can benefit the future ophthalmologist or dermatologist I fail to see. I can comprehend the value and am glad to admit the desirability of general practice as a stepping-stone for the neurologist or gynecologist; but the aforementioned opinion is altogether too sweeping when applied to all specialties. I would put much less emphasis on general practice, but much more on general pathology as the essential basic element for all specialties. The real and ideal school for the specialist must be a large clinical material in hospital and dispensary work, with its attached scientific laboratories, under the direction of an experienced master. The man who, without such schooling, dashes into a specialty is likely to use his private patients as a material for his studies—a somewhat questionable procedure. As I said before, it is this kind of would-be specialists who, by their blunders in the first years of their practice, bring discredit on the whole institution. It is this kind of specialists who evoke such bitter criticism as could be heard in that famous discussion before the Chicago Medical Society about two and a half years ago. Some of our most representative men aired their feelings against the prevailing style of specialism then and there, and while most of what was said could easily meet with the heartiest approval of the unbiased hearer, a good deal was harsh and unjust. Listen to a few of those statements: "And yet one finds specialists of the ear who do not treat diseases of the postnasal space and pharynx. Specialists of diseases of the skin whose knowledge of the digestive and excretory organs is limited." And so, in turn, every specialty is taken to account. Further on the same speaker says, referring to autointoxication, malassimilation, etc.: "The above-named conditions give the dermatologist an opportunity to write volumes on skin eruptions with a nomenclature horrifying in degree." Another speaker evidently intent at being humorous said: "Many specialties have but a narrow basis to build on; they are shaped like an inverted pyramid. Some have been built on an instrument or appliance; others on a nomenclature. Gynecology on the speculum; nose and throat on the laryngoscope; genito-urinary on the endoscope and cystoscope; orthopedic surgery on the tenetome and plaster of paris; dermatology on a nomenclature; nervous diseases on electricity; otology on the otoscope and Politzer's air bag."

I must leave it to those representing other branches of medicine to speak for themselves. But I may be permitted to use this opportunity, though somewhat late, to show the injustice of those hits made at dermatology. The fact is that this department was not represented in that discussion.

I do not feel it my province to defend dermatology against any attacks on its right to recognition as a legitimate and most important field for special study and special practice. Dermatology is too proud to defend its raison d'être. For more than fifty years the scientific study of skin diseases has been carried on by an indefatigable lot of workers in all civilized countries with results surpassed only by the more conspicuous and brilliant achievements of modern surgery. To charge dermatology with being little more than a mere aggregation of titles of diseases denotes either ignorance, lack of sympathy or wilful vituperation. Nobody realizes more than we dermatologists that the numerous attempts to classify the various cutaneous disorders after the example of other sciences like botany or zoology, have not proved altogether satisfactory; but the respective labors of a Willan and Bateman at the beginning of this century, of the great reformer, Hebra, in the '50s, of Auspitz, Bronson and Jessner more recently, to mention only a few representative names, have not been entirely lost. They have helped to clear up many a dark spot, to group together many apparently different disorders, to separate others of seeming likeness, but distinct in their essential nature. Our nomenclature may seem indeed "horrifying in degree" to the unitiated, but to the dermatologist the many titles are nothing but excellent servants, intended to promote universal interchange of ideas and never allowed to become our masters. The names are like the short inscription on a painting, useful for ready reference; behind them stands a mass of pathological, histological and etiological study. Let bacteriology get a few years older and you will have a terminology there which will make us poor dermatologists blush for our comparative insignificance. This sneer at our nomenclature reminds me of the kind of diagnoses that are occasionally made in practice, when the patient is told by his doctor "Oh, this is no cancer, it is just skin disease." Are we to go back to that lovely era of humoral pathology, when indeed it was quite an unnecessary ballast to know anything about cutaneous affections, when finer distinctions and differentiations were superfluous, because any eruption on the skin was looked on merely as the outward sign of an impurity of the blood, when the physician without troubling himself much whether his patient had the itch, ringworm, acne or eczema, was ever ready with his purgatives, diuretics and alteratives, poured without aim or choice into the poor victim? Horrifying nomenclature indeed! The 62 volumes of the *Archives for Dermatology and Syphilis*, the 30 volumes of Unna's *Monthly Journal for Practical Dermatology*, the dozens of the French *Annales* and our own *American Journal for Cutaneous Diseases*, not to mention the British and Italian periodicals, contain nothing but discussions as to names. The American Dermatological Association, which convenes annually for its scientific deliberations, the triennial International Congress for Dermatology comprising hundreds of the most eminent physicians and surgeons of all countries, the many smaller national and local special societies have little more to do

than to wrangle over names! In the idea of our critics at least.

Can I undertake within the limitations of a short address to signalize the scope, the scientific and practical importance of dermatology? This would be impossible. Permit me to give a few illustrations suggestive of what signal service dermatology has been to general medicine.

Let me remind you that the epoch-making studies of Robert Koch on the nature and etiology of tuberculosis have been primarily undertaken on material furnished by that destructive skin affection which is known as lupus. Long before the discovery of the tubercle bacillus in 1880, clinical observation had made it more than probable that there existed a relationship between that local disease and generalized tuberculosis, statistics undertaken by various observers on large material having demonstrated that in more than 70 per cent. of all cases of lupus there existed simultaneously or followed eventually some other manifestation of tuberculosis. Now, when a new era of pathology had been inaugurated, dermatology eagerly took hold of bacteriological methods and proved quite a number of hitherto misunderstood skin affections to be nothing but forms of local tuberculosis. The well-known scrofulous ulcers of early and adolescent life; the wart-like formations often following infection in post-mortem work and known as verruca necrogenica or anatomical tubercle; the so-called tuberculosis verrucosa cutis, an affection occurring in the form of round, raised, papillomatous patches on the hands of butchers, coachmen and others occupied with diseased cattle; the many accidental ulcerations following infection by the tubercle bacillus, as for instance after circumcision, piercing of the ears, washing of infected linen; the rapidly progressive, ominous ulcers on the lips and in the mouth or other mucous outlets, observed in the last stages of consumption, besides some other rarer skin lesions were thus assigned a sure place in pathology. Much of the modern progress in the knowledge of the nature, the therapeutic and hygienic management of this all-important pandemic disease is justly due to the stimulus furnished by dermatological work. And right now we may hopefully look forward to much better success in our fight against that scourge when the magnificent results achieved in Finsen's light-ray institute at Copenhagen for the treatment of lupus, as well as the distinct effects of the Roentgen rays on the same disease make it more than probable that these, as yet somewhat mysterious agents, may before long be utilized against tuberculosis in other parts of the body.

Another example of the value of dermatological study may be furnished by that ever live and interesting chapter, the malignant and benign new growths. It will be readily admitted that nowhere are the conditions for observation and investigation more favorable than on the external integument, which is so frequently the seat of the various forms of epithelioma, sarcoma and other tumors. The transformation of apparently harmless eczema-like lesions into a most serious form of multiple sarcomas of the skin, better known as mycosis fungoids; the formation of numerous carcinomas on the skin of young subjects, who early in life on a dry and harsh skin develop excessive pigmentations in the form of freckles and many small ectatic blood-vessels, a disease first described by Kaposi as xeroderma pigmentosum and usually affecting several members of the same family; the nature of the so-called senile warts and their tendency to metamorphosis into flat epithelioma; the fact that some forms of cancer may remain local in character for many years and indeed have justly been called benign epithelioma, while others exhibit a most destructive energy and tend to rapid multiplication; the relationship of keloid to cancer; the knowledge of multiple melanotic sarcoma of the skin; the investigation within the last few years of those most interesting tumor-like vegetations due to an inoculation of the yeast fungi and termed blastomycosis; the pronounced influence of the systematic use of arsenic in gradually increasing and large doses on certain forms of multiple tumors, particularly those affecting the lymphatic glands known as pseudo lymphosarcoma, or Hodgkin's disease; the decided effect of Fowler's solution used locally only on some forms of epithelioma, a method not to be undervalued in patients to whom the word operation means untold horrors; these are some of the lessons which have been taught by dermatology.

And what of the earnest and unceasing labor bestowed by dermatologists in all parts of the world on the study of that most fearful disease, not of the skin alone but of all organs alike, leprosy? I do not intend to sound an alarm cry here; but believing as I do in the infectious nature of this disease, I regard it of growing import to us. Only two years ago there assembled in Berlin an international congress solely for the discussion of leprosy, its nature and the best means for its mitigation and extermination. As one result of that conference, I may mention the founding of a special journal for leprology, international in character, and supported by collaborators, mostly dermatologists, in all zones. The discovery of an easily recognizable bacillus in all products of lepra by Hansen, has wonderfully helped to instigate a great deal of scientific research and much has been done in the last few years toward the development of more rational methods of treatment, especially by an antileprous serum, though this is still in the experimental stage.

It is hardly necessary to remind you of the enormous importance of syphilis, a disease which no practitioner of medicine, no specialist, whatever his particular field may be, can afford to ignore, for syphilis spares no organ, no tissue. And need I emphasize the value of dermatology in this respect? Almost all the histological and experimental work in this department, all the descriptive detail, the development of the modern scientific methods of treatment, I refer especially to the employment of mercury in the form of hypodermic injections, is due to the work of the dermatologist and syphilographer. Nor have they neglected the many sociological and hygienic problems which are presented by that disease.

The illustrations just cited refer to diseases of a preeminently cutaneous character. But even in fields of purely clinical medicine, dermatology has often contributed to a better and richer pathological understanding. Take for instance diabetes. Very frequently this disease is first recognized by the dermatologist, to whom the patient is directed on account of the prominence of cutaneous disturbances, which are indeed quite manifold: often a more or less severe itching of the skin; again the appearance of numerous furuncles; occasionally even gangrene in some peripheral part, as for instances the toes; as rarer manifestations, large and peculiar ulcerative patches on the lower limbs, first described by Kaposi as dermatitis diabetica; finally the formation of innumerable smaller and larger yellowish tumors in the skin known as xanthoma diabeticorum.

Medicine in general and neurology especially will always be under obligation to dermatology for work done in reference to the distinctly trophic or neurotic dis-

turbances of the skin. I need only to refer to herpes zoster, popularly known as shingles, that most interesting disease, whose relationship to pathological alterations of the underlying nerves or nearest ganglia has been proved beyond doubt; to symmetrical gangrene of the toes and the finger tips or other peripheral parts, well known as Raynaud's disease; to the various forms of that strange bullous eruption, pemphigus, which we have strong reasons to attribute to deep-seated nervous changes.

Of much general value is the work done by dermatologists in regard to the various drug eruptions. I am glad to mention in this connection two important publications by American authors, J. C. White of Boston, and P. A. Morrow of New York. The untoward effects of our remedies must ever be kept in mind by the practitioner, and among the foremost of these are cutaneous disturbances. Of the long list of drugs with whose action in this respect we are not quite familiar, I will only mention as of chief interest on account of their frequent and varied employment, the iodin and bromid preparations. That potassium iodid very readily leads to a symptom-complex known as iodism, in which is comprised an eruption of small pustules and papules on the forehead, neck and shoulders, is quite well known. But besides these vulgar and comparatively harmless lesions, it is sometimes responsible, even after minute doses, in people exhibiting a special idiosyncrasy, for an eruption of large, copious bullæ which may cover the hands and the whole face and thus become of serious import. Bromids also produce almost inevitably, after being used for some time, the well-known brom-acne, In addition to this, dermatologists have, however, traced a most peculiar, I might say picturesque, dermatosis to its use. The senior students present to-night may still remember the case of an infant which was brought to our clinic last spring. On the hips and limbs and on the face could be seen sharply configurated, roundish and irregular, fungoid elevations of a pinkish color, with a slight central depression of the individual lesions, which proved to be quite firm, large papules. In spite of the apparent resemblance to infantile eczema of the face the diagnosis of a bromid eruption was promptly made and a statement then elicited from the mother that the child had for some time been subject to, and treated for, some sort of nervous attacks, was sufficient corroboration. We soon learned from inspection of the doctor's prescription, that the child had indeed been taking potassium bromid. The mere suspension of this drug was all that was needed for a cure.

Turning from these more or less clinical sides of cutaneous medicine to its purely scientific aspects, I would willingly submit to the judgment of the histologist and bacteriologist, if dermatology has not done more than its share in the advancement of these respective sciences. It might easily fill the space of a separate paper to show in detail what has been accomplished in this respect, and I will only point to that monumental work of Unna on the histopathology of the skin, a classical volume of over a thousand pages and a lasting testimony to the services of that prolific and suggestive writer and worker.

The proposition advanced in the earlier part of this address that the specialist must always remain a physician, that he must be well versed in general medicine, holds particularly good in the practical work of the dermatologist. The man who would look on the skin as a detached organ and treat its diseases from a narrow standpoint is bound to make a failure of his vocation. True, a large number of skin diseases, pre-eminently those of a purely parasitary origin, a very respectable class, by the way, can and should be managed by topical applications only, no matter how firmly the patient may be convinced that his blood is out of order and how eager he may be to get some purifying medicine. Notions of this kind are largely due to the inspiration drawn from the famous advertisements in our dailies and weeklies, the church papers not excluded. To respond to them borders close on quackery. I find patients in this country, as a rule, quite willing and capable of being enlightened, and it is only very rarely that a conscientious practitioner needs to resort to placebos. In this connection I wish to expose that most reprehensible habit of many physicians to feed every skin disorder, irrespective of its meaning, with arsenic in some form. I am fully aware of the beneficial and often curative action of this drug at the proper time and in the proper place, but given indiscriminately, it is more often harmful than useful, and I can not too strongly denounce its light-handed exhibition.

In the majority of skin diseases, on the other hand, which are met with in daily practice, there is indeed an important field for systematic treatment of the underlying cause. The teaching of Hebra, who in his enthusiasm proclaimed the purely local nature of such affections as eczema and acne, have long ago been discarded by modern dermatologists. The young girl who finds her face covered with blackheads and pimples will in vain try all sorts of soaps, salves and lotions. For while in acne there is a local, often parasitary, and besides this almost always a structural, anatomical element in its make-up, we can invariably ascertain important deviations of the assimilative and eliminative functions from the normal standard, and consequent on these we find often changes in the morphological aspect of the blood. Whoever undertakes to treat acne without the most careful attention to the diet, general hygiene and correction of the conditions just alluded to, will be disappointed.

And so it is with eczema. It may sound ungrateful from one to whom the traditions of that old and venerable school of dermatology at Vienna are still as dear as ever, but I can not help declaring and teaching as a result of unbiased observation and study, that I look on eczema as something more than a mere local catarrh of the skin. Sure enough, many instances of that protean disease are primarily due to some local irritation, and in all probability to some sort of parasite of which Unna has lately shown us quite a variety, since he has himself discarded his former Morococcus. These local forms might better be called dermatitis eczematodes. They are, as a rule, easily managed and no physician ought to lose much sleep over them. True eczema, however, the kind that appears often apparently without any external provocation, that recurs in spite of the most careful local treatment and is liable to persist for years, is due to a multiplicity of constitutional disturbances too varied to permit of enumeration here; disturbances which may be conveniently comprised under the designation of autointoxication. As a classical representative of this category, I might mention gout and its congener rheumatism. Nor should we forget that important type of nervous eczema. These kinds of eczema demand for their relief the most circumspective management, require besides a mastery of a good deal of technical detail as regards the topical treatment, a wide acquaintance with general pathology and general medicine. Mark well, it is the combined local and systemic

action in such cases which alone can promise success. Mere reliance on dietetic, hygienic or internal treatment can not succeed in removing the deep-seated anatomic alterations of the skin, which are the result of a chronic catarrhal inflammation in loco, leading to hypertrophy in all the layers of the skin. No more would you undertake in the case of a mature cataract, which is due to diabetes, to clear up the cloudy lens by an antidiabetic diet or expect the disappearance of hemorrhoids, the result of an impeded portal circulation, from stimulation of peristalsis alone.

To put before you still further illustrations in order to show the value and importance of dermatology would be, I fear, too severe a tax on your indulgence. Maybe you have already concluded that dermatological nomenclature is horrifying indeed.

There is only one more point which I can not suppress, for it is always near and dear to my dermatological heart, and though I have urged it time and again without response, I shall never tire of repeating that the American schools of medicine, our own not excluded, and the American hospitals, with very few exceptions, make an altogether too insignificant provision for the cultivation of dermatological studies. When, eleven years ago, this college first established a distinct chair for the teaching of skin diseases, and I was invited to hold one clinical demonstration each week, some of my friends used to discourage me by predicting lack of clinical material and consequent lack of interest on the part of the students. It is with pardonable satisfaction that I look back to the record of dermatological instruction in this school during these eleven years. We have succeeded in building up a clinic, which now justifies daily demonstrations in our dispensary and which is ample to illustrate our regular clinical lectures. The students have invariably shown a keen interest in this branch and have, as a rule, left our school well prepared for the demands of ordinary general practice, while a few have even chosen dermatology as a field for special study in which to-day they are conscientious and faithful workers. But I hope for still better work, particularly in the direction of hospital and laboratory facilities. It is invidious to draw comparisons, and almost humiliating to look over to such places as Paris, Vienna and Breslau. The famous Hospital St. Louis in Paris contains hundreds of beds for patients suffering from skin and venereal diseases. Its unique Baretta collection of life-like wax models of cutaneous disorders forms a treasury which perennially attracts a pilgrimage of seekers of instruction. The resources of the general hospital in Vienna, with its almost 300 beds for the same purpose, are too well known to need reiteration here. But even in that comparatively small Silesian town, with its 200,000 inhabitants, in Breslau, you may see a special institute, a large building, exclusively for the advancement of dermatology. It contains several wards, polyclinical rooms, bacteriological and histological laboratories, rooms for photographic, particularly for stereoscopic reproductions, lecture halls, complete bathing arrangements, drug rooms, in short, it is an ideal dermatological household, under the leadership of that enthusiastic master, Neisser, and his assistants. Where is the millionaire who will ever endow anything like it here?

Let us keep our eyes open to our short-comings and possible defects, let us continuously strive for further improvements in our methods of instruction and our technical facilities. Then, indeed, may the day not be far off when our young graduates will cease to wander across the water in search of higher medical education; when, as Osler predicted recently, the current of seekers of knowledge and skill may be reversed toward our own shores. Then the United States of America will be the leaders not only in all spheres of industrial and commercial activities, but also in the higher domain of the science and art of medicine.

ETIOLOGY OF DYSENTERY.*

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Our imperfect knowledge of the nature of dysentery is not due to lack of opportunity for, or of energy in, its study. The disease, in the past quarter of a century, has not escaped the attention of bacteriologists, although it must be confessed that the results of somewhat extensive studies along these lines have been far less conclusive than might have been predicted. The attempt to establish a common etiological factor for all cases of dysentery has thus far failed. This failure has tended to emphasize the existence of several pathological states for which the term dysentery is employed merely as the collective designation. That these conclusions regarding the disease may, after all, not be in keeping with the facts is at least open to suspicion. When we recall the protean nature of other infectious diseases, there can be no *a priori* objection to the hypothesis that the causative agent of dysentery need not necessarily vary for each of the many types of the disease that have, from time to time, been distinguished.

That the lines of demarcation between the several clinical and pathological types should be inaccurate is not a matter of wonder. Both the beginning and end of any given instance may vary very widely and the symptoms and lesions of cases arising sporadically in temperate climates may agree with those of dysentery occurring endemically in the tropics or epidemically in both localities. The terms "catarrhal," "tropical," "epidemic," and "diphtheritic" are far from signifying sharp-cut entities.

As must always occur when classification of a disease proceeds on clinical and pathological rather than etiological lines, the literature of dysentery is burdened with an interminable mass of appellations indicating the nature of the disorder or the author's conception of its pathological anatomy. Dysenteries, however, are now divided by the chief writers into several groups, depending on the clinical history or the mode of prevalence; thus Osler writes of the acute catarrhal, tropical or amebic, the diphtheritic, and the chronic dysentery. Davidson considers the subject under two headings, 1, according to prevalence—epidemic, endemic, the dysentery of war and famine; 2, on clinical grounds—acute, fibrinous or pseudo-diphtheritic, and chronic dysentery. Kartulis described endemic, epidemic, and sporadic varieties; Manson speaks of a catarrhal and ulcerating dysentery, while Delafield distinguishes in the environs of New York at least five distinct types of the disease, only one of which appears to be due to a specific agent, the ameba coli.

Bacteria have been urged by many investigators as the cause of dysentery. The earlier studies of Klebs, Prior, and Ziegler have now only a minor historical interest, although Ziegler still holds that the relation of certain bacilli to the lesions speaks for their pathogenic

* Presented to the Section on Practice of Medicine, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

action. The early studies of Hlava on the epidemic disease yielded quite inconclusive results. Chantemesse and Widal were somewhat more fortunate in that from five cases of tropical dysentery they obtained a bacillus which, when injected into the stomach or rectum of guinea-pigs, gave rise to diphtheritis, an observation, however, which Grigoriew, who believed that he had isolated the same micro-organism from ten cases of dysentery, failed to confirm. Maggiori obtained from eleven cases of the epidemic disease B. coli communis. This investigator considered it highly probable that the disease was caused by this organism, whose virulence was intensified, a conception also shared by Laveran, Arnaud, Celli, and Fiocca and Escherich, who isolated the same organism from dysenteric cases.

The studies on this bacillus by Celli and Fiocca are the most important which we possess. Their cases included examples of the sporadic, epidemic, and tropical disease occurring in Italy and Egypt. They paid special attention to the occurrence and action of the ameba coli, so that they are doubly useful. They exclude this organism as a cause of any form of the disease and consider that a variety of the colon bacillus particularly pathogenic, which they designate B. coli dysenteriæ, is responsible for the lesions. A toxin separated from growths of the organism was found to act on the intestines of animals in a manner similar to the bacilli. Results similar to those of Celli were obtained by Del Pino and Alessandri. The colon bacillus is also believed by Escherich to play an important part in the production of colitis contagiosa in children—a disease which in its morbid anatomy agrees with catarrhal dysentery.

The bacilli thus far enumerated, except those of Chantemesse and Widal, show no specific properties. They all represent a well-known bacterial species, constantly present normally in the situations from which they were obtained in disease, and whose only unusual properties were increased virulence when tested on animals, and a capacity to set up enteritis when injected into the intestines of dogs and cats.

Investigation of an epidemic of dysentery which prevailed in Japan yielded different and apparently more convincing results. Ogata isolated fine bacilli, which liquefy gelatin, stain by Gram's method, and set up in guinea-pigs and cats intestinal ulcerations. A similar organism was later obtained in Padua by Vivaldi, since which time it appears not to have been found again. This list covers the bacillary species isolated in cases of dysentery, with the exception of an organism obtained by Shiga, who also studied the disease prevailing in Japan. This investigator's studies, which have a very direct value on my own, are deferred for the present.

On the other hand, a causative rôle in the production of dysentery has also been ascribed to the pyogenic cocci. Besides being found in association with bacilli by several of the investigators already mentioned, they have been regarded as the chief pathogenic agents by Zancarol, whose studies were carried out in Alexandria, and very recently by Ascher, who investigated cases arising in Eastern and Western Prussia. Similar observations were made by Silvestri, of Turin, and by Bertrand and Baucher in France. These cocci, especially the streptococci, were capable in certain instances of setting up, in cats, dysentery and liver abscess. An especial variety of endemic dysentery occurring in Cochin China, yielded Calmette the B. pyocyaneus. The same micro-organism was isolated from a small epidemic of the disease occurring in New York state by Lartigau; in another epidemic in children prevailing in Canada by Adami, and in certain sporadic cases, by Barker in Baltimore.

Protozoa have also been brought forward as the cause of dysentery. These organisms differ from the bacteria in not existing in easily demonstrable forms or numbers in the dejecta in health and the number of species occurring under all conditions is small. Among the protozoa the amebæ have achieved the distinction of being connected in a causal relation with endemic dysentery. Since the studies of Kartulis, Councilman and Lafleur, and Kruse and Pasquale, so firmly has the idea of this connection taken hold of the popular medical mind that the designation "amebic" as synonymous with "endemic" or "tropical" dysentery has been widely adopted; and yet the evidence on which this belief is placed can not be regarded as convincing. Until we shall have gained other means of differentiating amebæ than we now possess, and moreover until we are able to control their development with at least as great perfection as in the case of bacteria, the question of the precise part played by them in dysentery can not be satisfactorily determined.

The last ten years have seen a modification of the views regarding amebæ as causes of pathological conditions in human beings. That these organisms exist in diseases other than dysentery was conclusively proved by the early observations—Cunningham, Lewis—on choleraic discharges. Grassi found them in diseases so varied as typhoid fever, cholera, pellagra and colitis secondary to tumors. He also found them in the dejecta of healthy individuals, a fact further established by Calandrucci, Massiutin, Kruse and Pasquale, Gasser and Schuberg. It can, therefore, no longer be held that amebæ are necessarily pathogenic when found sojourning in the intestine of man.

That these organisms, when combined with bacteria, may cause intestinal lesions and even ulceration, is now established. The experiments of Kartulis and Kruse and Pasquale with the contents of hepatic abscesses supposed to be free from bacteria are all but convincing in so far as they are supposed to prove the capacity of amebæ alone to set up such changes. Councilman and Lefleur believed that the amebæ alone produced the intestinal lesions. Kartulis, on the other hand, sees in the occasional diphtheritis evidence of the action of bacteria, while Kruse and Pasquale have followed the latter in their penetration into the coats of the gut where they lie side by side with the amebæ, or even precede them in the invasion.

We may, I think, sum up the present knowledge of the cause of dysentery in the following way:

1. No bacterial species yet described as the cause of dysentery has an especial claim to be regarded as the chief micro-organism concerned with the disease.

2. It is unlikely that any bacterial species that is constantly and normally present in the intestine or in the environs of man, except where the disease prevails in an endemic form, can be regarded as a probable cause of epidemic dysentery.

3. The relations of sporadic to epidemic dysentery are so remote that it is improbable that the two diseases are produced by the same organic cause.

4. The pathogenic action of the ameba coli in many cases of tropical and in certain examples of sporadic dysentery has not been disproved by the discovery of amebæ in the normal intestine, and in diseases other than dysentery. While amebæ are commonly present and are concerned in the production of the lesions of

subacute and chronic dysentery, they have not thus far been shown to be equally connected with the acute dysenteries, even in the tropics. In the former varieties, bacterial association probably has much influence on the pathogenic powers of the amebæ.

The Dysentery of Japan and the Philippine Islands.—Every year, especially in the summer and autumn, dysentery prevails in Japan. The epidemic studied by Ogata occurred in the province of Oita. Lesions in the intestine are described in one instance, death having occurred on the eleventh day of the disease. The lower segment of the small intestine was hyperemic. The large intestine was greatly swollen so that the lumen was almost obliterated. The mucous membrane was hyperemic, and presented a deep bluish-red color, while the mucous membrane of the transverse and descending colon showed small ulcers, which were so numerous as to give to the membrane a sieve-like appearance. The peculiar bacilli described by him were obtained from these cases.

The most recent bacteriological study of Japanese dysentery has been made by Shiga. Out of the considerable number of cases of the disease occurring in Tokyo in 1897, thirty-six were subjected to examination. Shiga recognized that in order to prove that an organism which is suspected of standing in etiological relation to a disease is really the causative agent, four points have to be demonstrated, 1, that organism must occur constantly; 2, it must be a species not present normally in the diseased parts; 3, it must be pathogenic, and produce in experimental animals lesions similar to those from which it was obtained; and 4, it should, in virtue of its pathogenic activity in man, show the Widal agglutination reaction with the blood-sera of those who have suffered from the disease. From the series of cases examined, there was obtained from the dejecta and intestinal contents and walls, and from the mesenteric glands a bacillus which fulfilled all these requirements, and which was regarded as the cause of at least Japanese dysentery.

Before describing this organism, I wish to direct your attention to the dysentery prevailing in the Philippine Islands, especially in and around Manila. The report of the surgeon-general of the army for 1899 contains a tabulation of diseases observed among the American troops during the first four months of the American occupation of Manila. In it the dysenteries are included with the diarrheal diseases. The total number of cases reported was 445, death-rate being 0.48 per cent. The comment made is that the malarial diseases exceed their prevalence in the United States in the proportion of 370 to 96, and the diarrheal diseases in the proportion of 445 to 116, or about four to one in both instances. This compilation fails to give an adequate idea of the extent, severity and mortality of dysentery in Manila. Although the figures were not obtainable, I was convinced from nearly three months' residence in Manila that the enteric diseases, of which dysentery was the most frequent and important, were the chief causes of disability and mortality among the land forces of the American army.

The disease occurs in two main forms: acute and chronic. The stools and intestinal contents were scrutinized for amebæ. These organisms were absent or very difficult to find in the acute cases. In the chronic forms of the disease, in which ulcers were present, they were variable as to actual occurrence and number. Large hepatic abscesses, usually single, were encountered in a number of these cases.

The morbid anatomy of the chronic disease agrees in part only with that of the so-called amebic dysentery. The pathological changes in the acute disease differ widely from those of the chronic cases. I shall give an illustrative example: American soldier, dead on the sixth day of the disease. The entire large intestine from the cecum to the rectum is dilated and the walls of the gut are thickened. The mucous membrane is swollen, its consistence much increased, and the normal folds are thrown into elevated coarse corrugations. The general color of the mucous membrane is deep red, but there are present many brighter spots, evidently due to hemorrhage. A false membrane, consisting of scattered white elevations, occurs on the surface. Distinct ulceration can not be made out with the naked eye.

Bacteriology of Philippine Dysentery.—In the study of the bacterial flora of the disease, acute and chronic cases were utilized. Plate cultures in agar-agar were employed. The material for the cultures was obtained from the dejecta and from the intestinal contents after death. From the separated colonies slant cultures were made. Those consisting of the pyogenic cocci, which were never absent, were not studied further. Portions taken from the several bacillary colonies were tested on various culture-media with the result that two distinct types of organisms could be distinguished, especially in the acute cases. Their properties are as follows:

TYPE 1. Bacillus of average size; variable in length, usually occurs singly, sometimes in pairs, but only very rarely in filaments. The ends are slightly rounded. Moderate motility. Gram's stain is negative. Morphology: colon—typhoid type.

Growth took place on all culture-media at the room temperature, but better in the thermostat. Gelatin was not liquefied.

The colony forms resemble those of B. typhosus; after many successive transplantations on artificial culture-media, the colonies and slant growths become more opaque and abundant.

Potato: Growth takes place along the line of inoculation and spreads beyond. After some days it is a little elevated and of a pale-brown tint. On unfavorable potatoes the growth is slight, moist and membraneous, resembling that of B. typhosus when typical, excepting for the greater amount of moisture.

Sugar-agar is not fermented gaseously; in glucose media a moderate acid production takes place.

Litmus-milk: At first a very faint lilac color appears. It is discernible after 24 hours, but more marked at the end of 48 or 72 hours. After a lapse of 6 to 8 days alkali begins to be produced, which increases in amount until the litmus is rendered deep-blue in color. No coagulation of the milk ensues.

Indol: This body is variable in its formation. Even in sugar-free bouillon if may fail to appear, or be produced in small quantities only.

Suitable cultures of this organism, when tested for the agglutination reaction with the blood-serum of persons suffering from dysentery, whether the host or another individual, give in many cases a positive reaction.

TYPE 2. Present in all instances. In the acute cases it may not predominate, being less numerous than the members of Type 1. In all others it is the predominating bacterium. Its properties are variable, but agree with those of the group of B. coli communis. The main variations relate to the extent and rapidity of growth on the several culture-media as exhibited by the color, thickness, etc., of the colonies. The sugars are

broken up with the formation of gas. Litmus-milk is reddened promptly, but coagulation sets in at variable intervals—sometimes after twenty-four hours, at other times not for several days or weeks. Indol is produced, but can not be demonstrated in all cases within twenty-four hours. In morphology the bacillus resembles B. coli communis. Some specimens are motile at the end of twenty-four hours; in others, motility could not be demonstrated.

The results of the agglutination tests varied according as the blood of the host or another individual was employed. With the host there was frequently a reaction in low dilutions; with another person the reaction was rarely and very inconstantly obtained.

Before proceeding to the assumption that this organism was concerned with the production of the intestinal lesions of dysentery occurring in Manila, its absence from the stools of healthy persons and those suffering from other diseases must be established. Strong presumptive evidence of its being an unusual inhabitant of the intestine of man may be gathered from the facts already known concerning the ordinary intestinal flora. But as such observations would not suffice for a new region and under new conditions, the organism was searched for in other persons who had been in close association with those suffering from dysentery and also in inhabitants of other parts of the Island of Luzon. The organism was not demonstrated in healthy dejecta or in the evacuations of persons (native Filipinos) suffering from beri-beri. A further argument in favor of its restricted distribution is furnished by its absence from cases of chronic dysentery or its marked reduction in numbers.

Pathogenicity.—The pathogenicity of the bacillus type was studied, soon after its isolation, on mice and monkeys in Manila, and on various animals in this country with cultures brought back from the Philippines.

Mice are susceptible to subcutaneous injections, but react more readily to intraperitoneal inoculations. According to the dose, death takes place in from 12 to 48 hours—more rarely after several days. The site of the puncture shows edema, and when the inoculation is made into the peritoneum a slight turbid exudate is present. Bacilli are present in very large numbers in both situations and there is a general invasion.

Guinea-pigs react much in the same way as mice. The dose required is slightly larger, but successive inoculations quickly increase the pathogenicity. At first the organisms remain confined to the site of injection, but when the virulence has become intensified the body is invaded. Intraperitoneal injections cause a sero-purulent peritonitis, many bacilli being contained within polymorphonuclear cells. The intestines are hyperemic; the contents are watery and the bacilli can be cultivated from the fluid portions.

Subcutaneous injection into rabbits gives rise to a localized swelling, which is sometimes followed by death. At other times an abscess forms and perforates the skin, after which recovery may take place.

Cats and dogs are also susceptible to feeding with cultures, the first after the administration of croton-oil, the second directly. In both enteritis is set up; an increased secretion of mucus takes place, hemorrhages may occur, and bacilli are cultivatable from the dejections and intestinal contents. Ulceration does not take place.

Tests made with dead cultures on guinea-pigs show them to be highly toxic.

If the bacillus described is of significance in the etiology of dysentery, it must occur with regularity in the disease. Whether or not it will be found to have the distribution that is necessary in order to establish this relationship can only be determined when the study is carried on in widely different places and in all forms of the disease. That the bacillus is identical with the organisms obtained by Shiga in the epidemic of dysentery which prevails in Japan, there can be no reasonable doubt.

I have recently been enabled to study bacteriologically and pathologically a case of chronic Puerto Rican dysenterv contracted during the Spanish war. The autopsy showed the colon to be greatly thickened, especially along the sigmoid flexure. The mucous membrane presented a roughened surface without showing pronounced ulceration. The submucosa was thickened also, and there was considerable contraction. A very small amount of pseudo-membrane was present over the lower part of the sigmoid flexure. Bacteriological examination yielded two types of bacilli, the prevailing one agreeing with the type of B. coli communis, the other with bacillus type 1, already described.

The bacteriological studies of Egyptian dysentery published by Kruse and Pasquale contain numerous references to typhoid-life bacteria. Critical examination shows the majority to belong to the group B. coli communis. Still other examples of bacillus similar to, and possibly identical with, the B. dysenteriæ have been found in dysentery, although they are not suspected of standing in any etiological relation to it. Pansini studied four cases of abscess of the liver, three of which had followed dysentery. The bacilli which were isolated resembled B. typhosus; indeed, Pansini could not distinguish between the two series. Babes also, although only in a single instance, isolated such an organism from a case of dysentery.

The question naturally arises: In what way does the bacillus Type 1 differ from B. typhosus? When the properties of Shiga's bacillus and that of the Eberth-Gaffkey organism are compared, the criteria of difference are not numerous. The main features, however, are as follows: The former shows less marked motility when first isolated and a tendency rapidly to lose motility in artificial cultivations; it displays a more uniform generation of indol; after a brief preliminary acid-production in milk, there follows a gradually increasing alkalinization; it is inactive to blood-serum from typhoid cases, but reacts with serum from dysenteric cases to which the B. typhosus does not respond.

The Agglutination Test.—The tests in the case of the bacillus isolated in Manila were made at the time with blood obtained from acute and chronic cases of dysentery, and after the return to this country, with the blood-serum from the case of the chronic Puerto Rican disease as well as with blood obtained through the courtesy of Assistant-Surgeon Craig, stationed at the Presidio at San Francisco, the last having been obtained from convalescents and other soldiers suffering from chronic dysentery who had returned from the Philippines. The results were positive in the cases of the acute disease in which infection with the bacilli was established. It was also positive with the blood of the Puerto Rican case of chronic dysentery, but was inconstant with blood from other chronic cases. Dr. Osler has told me of his experience. In several cases of amebic dysentery that have come to his attention in the Johns Hopkins Hospital, the blood-serum has not caused agglutination of the dysenteric bacilli obtained in Manila. In a case of the

Puerto Rican disease a positive reaction was obtained.

These results are, I think, suggestive of the nature of tropical dysentery. The typical acute and infectious variety is probably bacillary in origin, and the indications are that the particular bacillus which has been described is the cause of this variety of the disease. On the other hand, the chronic form of the disease would appear to be dependent on at least two sets of causes: the one representing a continuation of the acute disease and probably due to the same micro-organism, the other being due to a different organism and apparently the ameba coli. The first variety of the chronic disease only may be expected to give the serum reaction with the B. dysenteriæ.

Protective Inoculation and Serum Therapy.—It is not unreasonable to hope that with the discovery of the specific cause of dysentery, particularly if it be a bacterium capable of being artificially cultivated, means will be found by which protective inoculation may be carried out with effect and safety. The fundamental conditions underlying such immunizations are now fairly established, and two general methods of accomplishing such results are open to investigation. In the first place, an active immunity may be achieved through the use of cultures of a determined grade of activity; in the second, the serum of animals may be employed either as a therapeutic agent or to provide a passive immunity.

It has been found possible, through the use of cultures destroyed by heat or the addition of chemicals, to protect small animals from the effects of subsequent inoculations of the virulent bacilli. Larger animals, such as the goat, when treated first with the dead and afterward with the living cultures, develop a gradually increasing resistance to the inoculations; their blood-serum assumes highly agglutinating qualities for the bacillus, and coincidentally acquires protective and healing properties. My own experiments relating to this topic have been carried out on small animals only, as no patient with acute dysentery has been seen by me since the serum from the goats has been available. Shiga has, however, been able to test the serum on human cases.

According to Dr. Eldridge, up to Nov. 1, 1899, Shiga treated with serum cases as follows: 1898, in Laboratory Hospital, 65 cases, death-rate, 9 per cent.; 1899, in Laboratory Hospital, 91 cases, death-rate, 8 per cent.; 1899, in Hirowo Hospital, 110 cases, death-rate, 12 per cent. During the same period of 1899 there were under ordinary treatment at Tokyo: at Honjo Hospital, 166 cases, death-rate, 37.9 per cent.; at Hirowo Hospital, 53 c ses, death-rate, 37.7 per cent.; at Komogome Hospital, 398 cases, death-rate 34.6 per cent; in private houses, 1119 cases, death-rate, 28.5 per cent.

I should, however, expect greater benefit from a species of vaccination, especially in those exposed to the endemic or the endemo-epidemic dysentery of the tropics. The encouraging results of the injections of the dead bacilli of Asiatic cholera makes the use of a similar procedure in persons exposed to dysentery advisable. The practical details of such inoculations will, of course, be established only after trials, preferably on human beings who are anxious to submit to this method of treatment.

Very little remains for me to say at the present time. It is only natural to ask whether the results given in the last half of the paper justify a belief in a specific organism of dysentery. My own sense is against that belief, although it must be conceded that the varieties of the disease are fewer than the clinical and pathologico-anatomical conceptions of this time would lead one to suppose. I am disposed at this time to view tropical dysentery as consisting of a bacillary and amebic form separable in their early and later stages by their clinical histories, their etiology and pathological anatomy. Whether epidemic dysentery may have a simpler etiology future studies will be necessary to decide. The view expressed by Shiga, to the effect that the bacillus isolated by him is the cause of the epidemic disease occurring in Japan, may be followed by the establishment of the same organism as the cause of other epidemics. My own observations prove the wide distribution and pathologic activities of the organism as well as its relations with a certain class of dysenteries.

NOTES ON TROPICAL DYSENTERY.*

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Professor Flexner has made such exhaustive remarks on the subject that it remains for me only to present the clinical history of a case. I trust I may be permitted to state also the impressions I received from consideration of the combined clinical and pathological features of the case. The impressions were new to me, partly because of ignorance and partly because it was the first opportunity I had of observing the clinical course and the pathological findings. I had seen tropical dysentery, and associated it with the group of symptoms we are accustomed to see in our climate; or with the more severe types seen during our civil war, with which we were made familiar by the writings of Woodward and others; or with the amebic form, for our more precise knowledge of which we are indebted as much to our colleagues, Councilman, Lafleur, Osler and Flexner, as to any other writers.

Toxic Symptoms.—In the case to be reported we find inflammation of the intestinal tract with its train of symptoms, we find an afebrile course, extreme emaciation and a profound toxic state terminating in the familiar typhoid condition. With these symptoms, the strikingly sallow, pallid hue of the skin, which I had seen in other cases, and which was attached by me to the ailment, was observed.

Serum Diagnosis.—In addition to the interesting toxic phenomena, the serum agglutination, as performed by Dr. Flexner with cultures of the bacillus of Shiga—the bacillus dysenteriæ—proving that the tropical dysentery of Porto Rico was similar to that of the Philippines added thrill to the interest of the case. Moreover, here again was applied a method of diagnosis, which with increasing experience seems to grow in value.

Scorbutic Symptoms.—During the period of observation, symptoms of scurvy set in so that, had we not had the positive results of the serum agglutination we might have thought the case was one of aggravated scurvy. So similar were the symptoms, we felt justified in resorting to antiscorbutic measures. It is needless to say they availed nothing. Nevertheless, the sore and bleeding gums, the subcutaneous hemorrhages, the complexion, the boils and the bloody flux tallied with many of the descriptions of old-time scorbutus.

The Anatomical Findings.—It could not be otherwise than noticed, that in spite of the grave and extensive symptoms, but relatively few anatomical changes were found. The small amount of ulceration of the intes-

* Presented to the Section on Practice of Medicine, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

tinal tract contrasted strongly with the large ulcers and sloughs in amebic dysentery. Then, too, there were none of the embolic phenomena seen in the latter infection. The extent of the anatomical lesions were, on the whole, disappointing. Briefly told, the story of the case is as follows:

G. R., aged 32, white; soldier; native of Kansas; admitted Oct. 12, 1899.

Family history: Father and one brother living and well; mother dead, cause unknown; one brother died of measles.

Previous Personal History: Has never been ill excepting with whooping-cough. At the age of 21 he joined the army, and has been a soldier until two months ago. During the Spanish-American war, he was camped near Mobile and Tampa, but did not suffer from any disease while there. He was in Porto Rico 11 months, and while there contracted conditions from which he is now suffering. He has had gonorrhea several times, but is not troubled with it now.

History of Present Illness: Disease began, after being in Porto Rico about three weeks. Many others began to suffer at the same time. Water and food while sufficient in amount, were bad in quality. Diarrhea was his chief symptom, and he had as many as 10 and 12 stools daily, and sometimes half his night would be spent on the water-closet. Associated with this was much rectal tenesmus. His stools contained much mucus, were watery to a degree, and some blood was found in them. At one time he passed something looking like a piece of bowel covered with mucus. During, and before having a stool he often had crampy pain; relief would come after having had a number of stools. He did not pass much urine after these attacks began. There was a constant bearing down pain over base of bladder, which is not relieved by anything. Nausea and vomiting often accompanied diarrhea, and vomit was of about the same character as stool—watery mucous and blood. Many symptoms of indigestion were present during these attacks; eructations, flatus and distention of abdomen, bad taste in mouth, coated tongue, and lack of appetite. Sleeplessness, burning pain along vertebral column were present continuously. He claims to have weighed over 200 lbs., before going to Porto Rico; weight on admission 120¼ pounds. Within three months he has noticed pains in his shoulders, and has had numerous boils on different parts of body, within the year.

Condition on Admission: Patient complains of four different things: a diarrhea, pain over bladder, pains in both shoulders, and boils. He is a tall man—5 feet 11¾ inches—with a large frame, this frame being covered sparely; weight 120¼. Skin of face is sallow, old parchment-like in appearance, but mucous membranes are pale. Pupils equal; react to light and accommodation. Arteries not tortuous. Epidermal scaling over thorax. Chest very prominent; badly emaciated; expansion good and equal; tactile fremitus normal. Percussion resonance normal. Respiratory resonance and fremitus normal. No râles anteriorly or posteriorly. Heart normal, except slight accentuation of second sound. Abdominal examination negative. Numerous scars in different parts of body due to boils. Over prominence of buttocks on right side, and tuber ischii on left side, two circumscribed areas of inflammation; furuncles at their height.

October 13: Urine, normal; sp. gr. 1016, acid; turbid; amber; no albumin; no sugar. Stools: no ameba; milk globules; no blood; mucus in quantities; contains curds; undigested masses of different colors; offensive odor. Blood normal.

Treatment: Patient is put on milk diet, f℥vi every two hours; urine, and bowel movements are noted in number and character.

October 14: Patient has had 9 movements within 48 hours; character as described. A large furuncle over right buttock was opened and curetted; a teaspoonful of purulent material escaped. T. P. and R. are normal, and patient feels much more comfortable.

October 18: While patient says that he feels much improved, there is no sign of abatement in his dysenteric condition, number of stools averaging 3 in 24 hours; character of stools has changed but little, if any.

October 19.—A new furuncle is showing itself at shoulder.

October 23: Stools have diminished to 2 in 24 hours, and patient feels quite well. He had some nausea with vomiting yesterday, but has recovered to-day. Color of stool is brown, characteristics otherwise unchanged. He has been put on meat diet. Enemata of silver nitrate 1 to 20,000 are ordered.

October 27: Treatment as above; condition unchanged.

October 31: Patient passed a partially formed stool; enemata are 1 to 16,000 strong.

November 14: Patient has but one or two bowel movements daily; occasionally they are partially formed, but there is comparatively little improvement as regarding consistency. His appetite is poor, and he tires of all food very readily. He is losing in weight right along, and seems to be getting weaker. His sleep is not especially sound. Heart seems normal; both sounds are strong. He has a number of purpuric spots, varying in size from a pinhead to a split pea, which he states he has had continuously during the past four months; first condition usually of larger spots; furuncle, which after evacuation of pus, resulted in the persistence of purpuric spot. Since his admission, he has had two large boils on right shoulder; these were surrounded by various sized areas of hemorrhagic effusion. Cultures from pus revealed staphylococcus albus. About three days ago, he began to complain of soreness of gums. They are quite reddish and edematous, but have never bled.

November 26: Patient seems not to assimilate food too well; his weight diminishes at each weighing. Last Monday (Nov. 21) he weighed but 100 pounds. The number of stools is also again increasing. Fecal material, examined two days ago for tubercle bacilli, but did not reveal any.

December: Patient is rapidly failing in every respect. There is little left of him besides skin and bones; condition of bowel movements has not changed; they are liquid and semi-liquid, brownish-green in color, containing undigested material, curds, mucus, and the last few days also some blood; odor is sour; no fecal odor. Appetite has been failing for some time. Chest examination is entirely negative. He occasionally has some pain in abdomen. Temperature has been as low as 95.6, and is continually subnormal; body cold and clammy. Stools have been examined microscopically, and contain mucus strands, fat globules, some blood and numerous bacteria. Urine is normal in every respect.

December 15, 1899: Emaciation continues; skin has for some time been dry and brittle, numerous scales all over; hair-pits all over body are covered by brownish scales; tongue is dry and glassy, side covered by white coating; teeth have sordes; voice is thick and low; complains of dryness of entire laryngopharyngeal tract. Examination of lungs shows no change; heart-sounds weak, but nothing abnormal. Abdomen boat-shaped; has had considerable pain in epigastrium for several days past; better to-day. No new hemorrhages over limbs. Joint surfaces look red; skin ready to break. Appetite good, craves, and eats ravenously of oysters, milk, etc. Temperature varies between 95 and 97. Pulse is fairly strong at about 90. Respirations vary between 12 and 15. During sleep sink as low as six. Patient feels much warmer than a week ago. Bowels move almost continually now; to-day a brownish liquid, with fecal odor.

AUTOPSY, DEC. 18, 1899, 10 A.M. UNIVERSITY HOSPITAL.
PERFORMED BY DRS. SAILER AND FLEXNER.

External Appearance: Body of man, extremely emaciated. Marked post-mortem discoloration on abdomen. Small sore covered by scab on right shoulder; another on the left lumbar region, brown; injected spot on right hip; numerous scars and ulcers on right leg: thickened fissuration over right knee. No rigor mortis.

Peritoneal Cavity: Small amount of reddish fluid. The wall of the colon contains areas of dark-black pigmentation. There is a slight injection of the peritoneal surface, particularly about the hepatic flexure. The glands of the mesocolon are

all enlarged to the size of peas, and of moderate consistency. The mesenteric glands are also enlarged, pale-gray, apparently covered by dilated lymph-vessels. The lymphatic vessels in the peritoneum are all greatly distended. The caput coli and small intestines are moderately distended. The lower border of the stomach is below the ribs; position nearly horizontal. The lower border of the liver is below the costal border. The left pleural cavity is clear. The right pleural cavity contains a few cubic centimeters of clear, straw-colored fluid. The right side of the pericardial cavity contains a large diverticulum, which extends from the peritoneum into the right pleural cavity; it communicates with the pericardial cavity by an opening .5 cm. in diameter.

Heart: Very small. Epicardium slightly thick and opaque. It forms ridges accompanying the blood-vessels. The latter are tortuous and the veins are slightly distended. There is a small patch of dense, white thickening on the anterior surface of the right ventricle. The right auricle is contracted. Foramen ovale is not patulous. No valve over the coronary vein. The tricuspid orifice admits two fingers; endocardium is clear and transparent. The right ventricle shows slight thinning of the walls, the muscle being 4 mm. in thickness. The muscle is brown and soft. The pulmonary valves are normal. The pulmonary artery is small, 6 cm. in circumference. The left auricle is small; endocardium is pale and opaque. The mitral valve admits one and a half fingers; mitral leaflets normal. The wall of the left ventricle is thin, measures 9 mm.; brown in color, contains trabeculæ of connective tissue. There is a slight atheromatous change in the anterior leaflets of the mitral valve. There is slight sclerosis at the base of the aortic valve and thickening of the corpora arantii. Willow-tree marking at the base of the aorta. Coronary artery is normal. Weight of heart, 160 grams.

Left Lung: Moderate anthracosis of apex and edges of lung. Lungs are pale and show considerable bullous emphysema, particularly at the apical edges. The bronchial glands are anthracotic and slightly enlarged. Surface of section is pale pink.

Right Lung: Apex anthracotic; incomplete separation of the two upper lobes.

Left Adrenal: Normal. Fatty degeneration in cortex. Small accessory below lower end.

Right Kidney: Normal vessels. Ureter not distended. Substance of the kidney is firm. Similar to the left. Weight, 117 grams.

Right Lung: The posterior surface of the upper lobe shows hypostatic pneumonia. On the anterior surface of the lower lobe there is an area of consolidation, sharply limited, of irregular shape, reddish color. The pulmonary tissue resembles that of the left lung.

Spleen: Small. Capsule thickened, wrinkled. Consistence firm. Trabeculæ markedly hyperplastic.

Renal Vessels: Normal. Ureter not dilated. Left kidney very firm, capsule strips readily, although slightly adherent. The cortex is finely granular. Stellate veins injected. On section the cortex is slightly thick. The glomeruli are greatly distended. The pyramids are normal. Weight, 117 grams.

Mesentery: Deeply discolored, the result of post-mortem decomposition apparently.

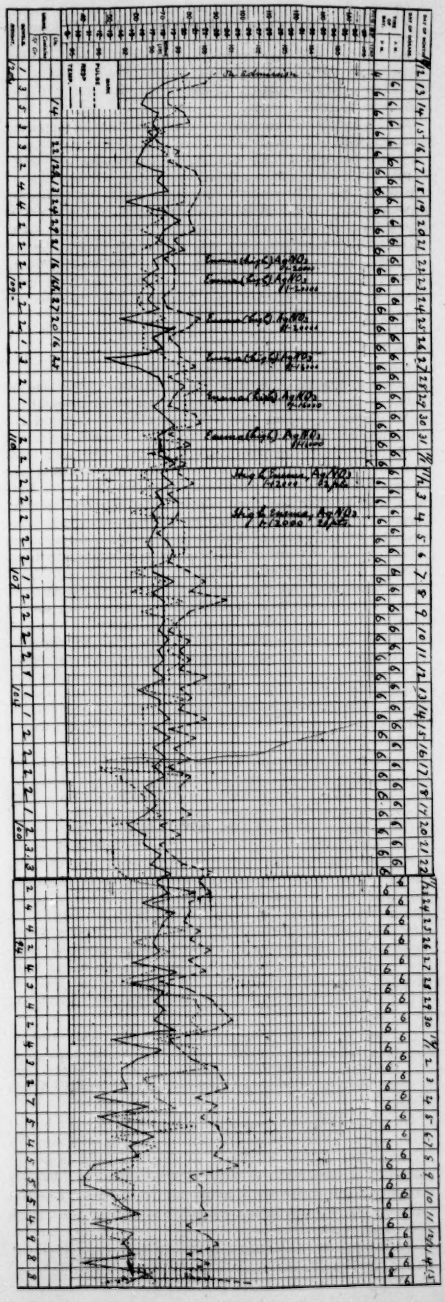
Mucous membrane of the stomach is smooth, soft and covered with mucus containing bloody pigment. Cardiac orifice dilated. The wall of the esophagus is thickened. The mucous membrane contains hemorrhagic pigment. The mucous membrane of the duodenum shows fine brownish pigment. The bile-duct is freely patulous.

Pancreas: Soft. Tissues apparently normal.

The intima of the aorta is pale, smooth. The aorta is elastic.

The lymphatic follicles in the duodenum are considerably distended. Throughout the whole intestinal tract there is fine granulation, more marked in some places than in others. No ulceration; slight hypostatic congestion of certain areas.

Liver: Firm; capsule transparent. Weight 1160 grams. Section normal.



Large Intestine: The peritoneal surface, particularly along the sigmoid flexure, shows dark points and lines of discoloration. There are no peritoneal adhesions. On opening the intestine the rectum and sigmoid are contracted, whereas the transverse colon is distinctly dilated. The intestinal mucosa is thickened throughout, and there are recent hemorrhages into its substance. Throughout the entire length there are present, in addition, numerous, dark, slaty areas of pigmentation, indicative of old hemorrhages. No definite pronounced ulceration is present. The general mucosa presents a granular appearance, and there are superficial areas of denudation of the epithelium. On section the submucosa is firm, but not greatly thickened, excepting in the lower part of the intestine, where there is much contraction. In the region of the transverse colon the mucous membrane is also edematous; that of the cecum is less involved and the small intestine has entirely escaped; only in the lower portion of the sigmoid flexure is there an irregular and small development of pseudo-membrane.

Anatomical Diagnosis: Dysentery. Ulcerative and pseudo-membranous colitis. Infarction of lung (?). Anemia universalis.

BACTERIOLOGICAL PROTOCOL.

Cultures from liver, spleen, bile, infarction of lung, mesenteric gland, sterile after twenty-four hours in the thermostat.

Petri-plates were made from the intestinal contents taken from the hepatic and sigmoid flexures by burning the surface of the intestine before their removal. Plates were also made from the contents of the large intestine after removal at the autopsy and opening. All plates which were crowded with colonies were discarded; only discrete colonies were selected, from which various kinds were transferred to glucose-agar. From the many transplantations made, a small number only showed at the end of twenty-four hours no gas formation. These on comparison showed similar growths.

Coverslips gave short bacilli with rounded ends, showing moderate motility. Transplanted to the milk there is produced at the end of the first twenty-four hours a moderate acid production which, after a lapse of several days, is succeeded by an alkaline reaction of the milk. No coagulation. Gas is not made in any of the sugar media.

The organism corresponds with the bacillus dysenteriæ isolated from cases of dysentery occurring in Manila.

In addition to the case recorded I had the opportunity, through the kindness of Dr. Wilson, of Beaver, Pa., of seeing a case with him. It corresponded in clinical features with the one just recorded, save that scorbutic symptoms were absent. The disease was contracted in the Philippines, eleven months previously, but despite change of climate and the excellent care and treatment of Dr. Wilson, who early recognized the gravity of the case, the course of the disease was not abated. The gravity of the infection and the intensity of the intoxication can be realized when we consider that a lusty youth of two and twenty could be reduced from over 200 pounds to less than 90, and the flower of his country, be carried to his grave. Our new possessions bring to the medical profession new responsibilities in combating these dire diseases.

DISCUSSION ON PAPERS OF DRS. FLEXNER AND MUSSER.

DR. WILLIAM OSLER, Baltimore—I have had some experience with this subject during the past six months. When the Doctor returned from Manila and told me about the bacilli I think the impression was at that time that the ameba would have to take a back seat in cases of dysentery. We had one instance admitted to the ward; he was a soldier from Porto Rico with dysentery which had lasted some months. No bacilli could be discovered. An interesting point was regarding the blood brought from Manila where the bacilli were obtained. Also, Dr. Flexner's second point, in amebic dysentery whether the bacilli could be outlined and whether the blood agglutinated would react with Shiga's bacillus. We have had six cases of the ordinary type of so-called amebic dysentery, but the blood did not react with Shiga's bacillus, which would indicate distinctly that the disease is separate and distinct from the dysentery as met with in the tropics. I should like to ask Dr. Flexner if this dysentery, which is growing so wide-spread, is not probably the same form which occurs in this country in poor-houses and jails, and which occasionally is seen in the hospitals and which has been locally epidemic. These features are quite different from the ordinary amebic dysentery.

DR. NORMAN BRIDGE, Los Angeles—I should like to ask Dr. Flexner if typhoid fever may occur in conjunction with the form of dysentery which he has described, and if the blood-serum of the dysenteric patient will produce the Widal reaction of typhoid; that is, if it will agglutinate a typhoid culture? I ask these questions because of my observation of a patient in hospital, a year ago last fall, whose history was substantially like that of the patient referred to by Dr. Musser, who had all the appearances he describes—great prostration, purpuric spots, etc. The patient had been a soldier in Cuba, and I supposed the case to be one of tropical dysentery until the Widal reaction of typhoid fever was produced. The patient died a few days after purpuric spots appeared. In another case under observation in hospital within the past three or four months, the same symptoms were present, purpuric spots and all. The patient was a soldier who had returned from Manila, and he died with the dysentery symptoms. In this case no Widal reaction could be produced.

DR. C. H. HUNTER, Minneapolis—It may not come amiss to report two cases of dysentery that came under my observation. In one, a soldier belonging to the 13th Minnesota, the ameba could be demonstrated in the secretion. This patient died, and he had all the appearances that have been described. The other case was similar to, but not so severe as, the case described by Dr. Musser. The symptoms were severe if the young man permitted himself to continue exercising, or to labor and work, even intellectual work. If he remained in the hospital under careful diet and rest, the symptoms would not be severe and the dysenteric discharges would nearly cease. The discharges were examined by Dr. Westbrook and no amebic germs could be found. There were no agglutination phenomena like those reported. No adequate cause for infective symptoms could be demonstrated. I speak of these cases because it is quite possible that the information may be of some value. They will be reported elsewhere more fully.

COL. A. A. WOODHULL, U. S. A.—I can add nothing to what Dr. Flexner has said. The statements that he has made in such a complimentary way are of service not only to the army but to medicine at large. My own duties in Manila were purely administrative, having no direct relation to clinical medicine. One can not work with both hands under those conditions. We suffer from a great deal of dysentery and other affections peculiar to the tropics. In a general way we found that it was desirable that the severe cases should be sent out of the country because of the fact that there was a general tendency to reaction. But that is a little apart from this discussion. There is nothing I can properly say that will add to the professional knowledge on this subject beyond what has been stated by Dr. Flexner, Dr. Osler, and others.

DR. FRANKLIN E. MURPHY, Kansas City, Mo.—While listening to the report of Dr. Flexner I received the impression that he is not ascribing such an important part, in the production of so-called tropical dysentery, to the ameba coli as is taught by Dr. Osler and others who have studied the disease. I am extremely interested in this subject for the reason that in our locality, Kansas City, in the same latitude as Philadelphia, I have seen three cases of amebic dysentery. The first case I saw seven years ago. The case was reported in THE JOURNAL. The patient lived continuously in Kansas City for more than eight years prior to the attack and in these eight years had not been ten miles from home. I have since seen two other cases. One a patient who lived about fifty miles west from Kansas City, in Kansas, was suspected to have a pulmonary abscess consequent to pneumonia. A carefully taken history showed, however, chronic dysentery; later, symptoms of sepsis; then was found a large area of dulness at the base of the right lung, and after a time expectoration of much pus. Amebæ were re-

peatedly demonstrated in this pus. This patient had never been below this latitude.

The third case was that of a man who lived in Kansas City for twelve years, and who, in that time, had never been out of the city. Amebæ corresponding accurately with all descriptions given were repeatedly found in the bowel discharges. I rise, merely, to report to the Section the occurrence of amebic dysentery in an inland city so far north as the latitude of Kansas City.

DR. V. C. VAUGHAN, Ann Arbor—I would like to ask Dr. Flexner if he has had an opportunity to make a bacteriological study of the so-called bloody flux that is sometimes quite prevalent in the Southern states. I have seen epidemics of this disease in Missouri and one or two small epidemics in Michigan. But the disease is very rare as far north as the last-mentioned state. A few years ago I made a bacteriological study of several cases of this disease and could find only the colon bacillus. However, this study was not very thoroughly carried out, and I have not since had an opportunity to pursue it further. In the camps in the Southern states during 1898 there were a great many cases of acute dysentery in which the patients passed considerable quantities of blood. These cases were easily amenable to treatment, and usually recovered after the administration of a few doses of castor-oil. In going over the sick reports furnished by regimental and other army surgeons I was struck by the fact that among the troops that remained in the United States in 1898 there were very few cases of chronic dysentery. On the other hand, during the Santiago campaign I saw a great many cases of dysentery, and these differed wholly from those which I had previously observed in this country. In Cuba the men with dysentery passed but little blood. They had many copious stools, and rapidly wasted away, becoming exhausted physically and apathetic mentally. I was also impressed with the fact that many of these patients recovered under the hypodermic administration of strychnia. I saw a great many men suffering with this disease who were apparently *in articulo mortis*, but who recovered if the heart was kept going by the use of strychnia. I think there were few cases of amebic dysentery among the soldiers who participated in the Santiago campaign.

DR. J. H. WILSON, Beaver, Pa.—A member of the 10th Pennsylvania Volunteers, came under my care in August, 1899, in whom the disease was progressive. He died April 20, 1900. The clinical type was as Dr. Musser has stated. The attack presented the appearances as related in the paper from the beginning to the end of the disease. There was no epithelium on the tongue; there was no blood in the stools; there was no pain, nor any elevation of temperature—which is a point that has not been mentioned by the speakers. During the greater part of the time the temperature was subnormal. Emaciation was progressive and went on to the last extreme, and the patient died from exhaustion. There was never any pain or tenesmus and no evidences of sphacelation of the mucous membrance.

DR. SIMON FLEXNER—Replying to Dr. Osler's question: I think it highly probable that the acute forms of the disease which we encountered may agree with those arising under the conditions mentioned by him. It is desirable that from now on all acute outbreaks of the disease should be examined in reference to their bacteriology and also to their blood reactions. The latter test will often be possible when the bacteriological examination is for one reason or another impracticable. I shall be happy to supply cultures of the bacillus to anyone desiring to carry out the tests. In regard to Dr. Bridge's question I see no objection to a belief in the existence of a double typhoid and dysenteric injection. I have, however, not encountered such an instance. Under such circumstances the agglutination phenomena might at first be very puzzling. Then it is to be borne in mind that the typhoid reaction may persist after recovery from typhoid fever, after which a dysenteric infection may be acquired. Dr. Hunter's question regarding the duality or multiplicity of tropical dysentery is answered in my paper. Abscess of the liver would appear to be common only in the amebic disease. It was not encountered in the acute or chronic bacillary cases studied.

DR. J. T. MUSSER.—There was an absence of fever; indeed, the temperature was subnormal throughout. I wish to lay stress on the method of diagnosis formulated by Dr. Flexner, the agglutination method. I also wish to emphasize the fact he has referred to, namely the absence of secondary infection in other parts of the body.

CASE OF MALIGNANT ENDOCARDITIS WITH RECOVERY.*

N. S. DAVIS, JR., A.M., M.D.

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CHICAGO.

D. McD., a locomotive fireman, aged 25, entered Mercy Hospital Dec. 4, 1899. His family history was excellent, and habits were good. He had la grippe seven years ago. During the past year he had suffered from frequent headaches. These occurred almost daily during the preceding month. The pain was severe, and lasted several hours; at times it came twice daily. During the same time he suffered from gastric distress, coming on a few minutes after eating and lasting one or two hours. Gaseous and acid eructations were frequent. For four or five months vomiting occurred soon after several meals, especially if work was undertaken then. His bowels were constipated. Hurried movements caused slight breathlessness. He had noticed at irregular intervals palpitation of the heart. For a year he had not had the endurance which he formerly possessed. His general nutrition was good, his tongue slightly coated, and breath heavy. Physical examination of thoracic organs revealed nothing. The liver and spleen were normal in size. There was slight tenderness in the epigastrium, but no distention of the abdomen.

He did not vomit after he entered the hospital, but the headaches persisted. Symptoms of gastric indigestion lessened, and his bowels were kept fairly regular. His pulse and temperature were normal for a week. On the afternoon of December 11, the former was 84 and the latter 99.2 F. Two days later the afternoon temperature was a little over 100. On the 16th of the month it was 101.4, and on the 18th, 103. His headaches were severe up to this time. During the following week they lessened and finally disappeared. His temperature resembled that of typhoid. It was usually from 101.6 to 102 in the morning, and from 103 to 103.6 in the afternoon. His face was not flushed; abdomen not tympanitic, and there were no rosy spots. The spleen was very moderately enlarged. He had little appetite, and was placed on a milk diet. At no time during the course of his illness could plasmodia be found in his blood, and it caused no clumping when Widal's reaction was attempted. On the 24th of the month he had a slight nosebleed. On the 26th the morning temperature became 99. A few days later in the afternoon rise became less and of shorter duration. For instance, on Jan. 1, his temperature was not above 99 from 4 a. m. to 2 p. m., and not above 100.5 from 3 p. m. to 7 p. m. A 8 p. m. it reached its maximum, 101.2.

About a week before this I observed that the first sound of the heart was peculiarly feeble, so weak in fact as to be almost inaudible. The next day it was not quite so feeble, but near the left margin of the sternum, opposite the second intercostal space, a roughness of the second sound was every evident. This gradually became more intense, and finally a clear rough murmur could be heard. It was audible in an area about as large as a silver dollar. No thrill could be felt, and the heart was not enlarged. His pulse was of medium size, soft, and showed from 84 to 96 heart-beats per minute. His temperature was low, except for a short time in the afternoon, when it sometimes reached 102, and always 101.5. On January 6, his temperature was 100.4 at 8:30 a. m.; 101 at 2 p. m. At 1:50 p. m. he had a severe chill, which lasted twenty minutes. His temperature rose to 104.5 at 6 p. m. During the evening he sweat profusely. At 9:45 the next morning he had a similar

* Presented to the Section on Practice of Medicine, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

chill. His temperature at 10 was 104, and it reached 105 at 4 p. m. Profuse diaphoresis followed the chill and fever. On the 8th he had no chill, but on the 9th he felt cold at noon, when his temperature was 103,4. Up to this time he had been bathed as typhoid patients are. He had become greatly emaciated and very feeble. Recovery seemed very improbable. Daily inunctions of unguentum Credé were begun. He had no more chills and his fever steadily lessened. On the 15th his temperature was 99.4 at 5 a. m., 97.6 at noon, and 101 at 10 p. m. The inunctions were discontinued. Two days later he had another chill and his temperature rose to 103. The following days it was 102.2 at 8 a. m., 103.5 at noon, and 102.6 at 4 p. m. Daily applications of the ointment were again commenced. After January 20, his temperature did not exceed, and rarely reached, 100. He steadily improved. He was able to take more nourishment and gained strength rapidly. The heart murmur continued, but was not so rough in quality as at first. Although his temperature had been normal for a week, on January 31 he awoke with fever. It was then 102.8; at 10.30 a. m., 101.4; at 1:30 p. m., 102.2; but the following day it was again normal. There was no apparent reason for this rise of temperature. For ten days the thermometer rarely registered an oral temperature of more than 98. On February 20, after he had been sitting up for some days, his left leg became moderately edamatous to the hip. There was pain and tenderness in the calf of that leg. By March 4 all evidences of this phlebitis was gone. On the 6th he was discharged from the hospital. He had nearly regained his weight. He felt perfectly well, but lacked endurance. Slow walking did not quicken his heart. Its sounds were normal, except that the second at the base was slightly rough. It would be called an impurity rather than a murmur. His digestion was good. During his illness his urine was examined frequently; it contained a trace of albumin only once. A positive diazo-reaction was obtained several times. On January 1, his blood contained 3,860,000 red corpuscles and 5200 white. March 5, it contained 5,020,000 red and 6800 white. At no time did he have pulmonary symptoms.

When this patient first entered the hospital a diagnosis of gastroenteritis was made. When his fever began typhoid was feared, but except for the continued high temperature there were no symptoms of it. The possibility of malignant endocarditis was considered soon after the pyrexia developed, and I felt that the diagnosis was confirmed when the persistent cardiac murmur was discovered.

The history of this case is that of an acute infection of a severe type, in the course of which a heart murmur persistent and characteristic of aortic regurgitation developed. The fever was not typhoid, malarial, tubercular, nor could a source of sepsis be readily found. The course of fever and its severity made the case during the first of his illness resemble those cases of acute endocarditis which are described as typhoidal. Later the type changed, and it became distinctly septic. Such a change of type I have seen in several other instances.

A hard and fast line can not be drawn between simple and malignant endocarditis. Anatomically they are identical. Those cases in which high fever seems to originate from endocarditis are usually called malignant.

In this case there were none of the usual sources of infection, such as pneumonia, abscess, suppurating wounds, gonorrhea, or middle-ear disease, and it was not preceded by any typical infection. Is it not possible that the chronic gastritis may have made infection possible? This recalls to my mind another case seen by me several times in consultation, in which severe subacute enteritis seemed to be the channel through which infection occurred. Intense putrefaction of the contents of the intestines lasted for some weeks. It was accompanied by persistent fever of moderate grade, which was intensified whenever the putrefaction was. The patient had a chronic valvular disease of the heart, which was well compensated. During his long illness his physician, who had attended him for many years, noticed no changes in the character of the physical signs of heart disease. Nor did his heart or the murmurs change while I saw him. The existence of malignant endocarditis was suspected or thought possible, but could not be demonstrated until near the end of life, when embolism in many places and finally a rapid enfeeblement of the heart made it evident. In this case no wound or channel through which infection was likely to occur could be found, unless the intestinal disorder, which was chiefly characterized by intense putrefaction in the fecal mass, afforded it.

It has been my lot to see numerous cases of malignant endocarditis. This is the first in which I have seen recovery.

In 1888 Sansom[1] described a case. The evidence of chronic valvular disease did not disappear, but septic infection did. This case was treated with sulphocarbolate of zinc.

Pye-Smith[2] reported a case of recovery from ulcerative endocarditis, in which emboli had been observed in various arteries.

James Finlayson[3] reported an attack of ulcerative endocarditis in a boy, aged 10 years, ending in recovery. The case presented an alarming feature in the frequent occurrence of paroxysms of pyrexia. During these paroxysms, however, no rigors could be recognized. The patient, having rheumatic disease, was first treated by the usual antirheumatic remedies. When the paroxysms of high fever developed, quinin was administered in large doses. After six months the patient was dismissed from the hospital as convalescent, and a month later was reported quite well, active in his limbs, free from cardiac symptoms and gaining flesh.

Dr. Sainsbury[4] reported a case of ulcerative endocarditis in a boy, aged 13 years, cured by antistreptococcus serum. The cardiac dulness began in the first left intercostal space and extended to the right sternal border. The heart's apex-beat was in the fifth space, four inches to the left of the midsternal line. There was a well-marked thrill and a double-murmur at the apex. The liver and spleen were not palpable below the costal margin. The patient was admitted to the hospital and 15 grains of salicylate of soda were administered every two hours in a mixture. Then treatment with liquor hydrargyri perchloridi was commenced. The boy grew languid and took food badly. After about two months of treatment 20 c.c. of antistreptococcus serum was injected. During the next eight days 10 c.c. were injected four times. The area of cardiac dulness became again normal, and the heart's apex-beat well within the nipple line. Examination of the blood showed no streptococci, five days later another 10 c.c. of serum was injected. This was followed by marked improvement, and a week later the patient was able to be out.

A case of ulcerative endocarditis successfully treated by antistreptococcus serum is reported by J. W. Washburn.[5] The patient, a female, aged 22, came under observation a few days after the commencement of the illness. During the first seven weeks she suffered from an ill-defined septicemia, without any local manifestation of the disease. Up to the time when serum was first injected she was progressively losing ground, and a few days before the commencement of the injection the pulmonary valve became affected. The result of the

treatment was most satisfactory. At the end of five weeks injections were given every other day instead of daily.

Dr. Margaret Dunn (Pearse)[6] records the case of a girl, 16 years old, who was also treated with antistreptococcus serum.

Moritz[7] reports a case of ulcerative endocarditis cured by antistaphylococcus serum. The patient, aged 22 years, had had gonorrhea and cystitis eight months previously. At the time of the onset of the malady no gonococci could be discovered. A musical murmur was heard, and the diagnosis of malignant endocarditis seemed to be beyond doubt. Moritz decided to try antistaphylococcus serum, because a previous case had shown after death the presence of the staphylococcus albus and aureus. The acute symptoms disappeared after six injections of 5 c.c. of the serum. The temperature was normal about six weeks later. Metastatic inflammation was observed in the right calf and in the left ankle after two of these injections, but no suppuration occurred.

It is difficult to determine from the scattered literature of the subject what is the mortality of malignant endocarditis. Occasionally cases such as these are recorded. The much larger number of fatal cases are not. The mortality is high, and the malady is rightly regarded as almost invariably fatal.

It is not possible from these few cases to discuss treatment satisfactorily. It is a noticeable fact that the majority were treated with remedies believed to have some specific value in combating streptococcus or staphylococcus infection.

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DISCUSSION FOLLOWING SYMPOSIUM ON ARTHRITIS.

DR. F. A. PACKARD, Philadelphia—At the present time rheumatism is a term used to cover much of our ignorance. It is now applied to almost any painful affection, such as neuritis, myositis, pleuritis and various forms of endocarditis, even where there is nothing in the history of the case to warrant the diagnosis of rheumatism. Rheumatism should not be the diagnosis, simply because there is present trouble with the endocardium or an affection of any one structure. The occurrence of endocarditis, pericarditis or inflammation of other serous membranes does not warrant the diagnosis of rheumatism. These occur from a variety of infections. If we diagnosticate various lesions as rheumatic we are in danger of covering our heads in the sand and ceasing to look for ultimate etiological factors in each particular case. A proper definition of acute articular rheumatism would, I think, be as follows: Acute rheumatism is a well-defined series of morbid signs and symptoms produced by an etiological factor at the present time not definitely known, but probably of micro-organismal origin. The process is characterized by a tendency to attack serous membranes, notably the heart and endocardium.

It seems to me that in arthritic diseases there is quite a distinct series of gradations, each being separate and distinct, a regular and progressive series leading from acute articular rheumatism to the various arthropathies. Starting from, 1, acute articular rheumatism, one can pass to, 2, the acute arthritis occurring in the course of well-recognized infections, such as scarlet fever and gonorrhea; 3, chronic infectious arthritis, such as is especially seen in children and young adults, in which we can not always find the seat of primary infection; 4, somewhat allied to these are cases of arthritis deformans; here there is a strong likelihood that the infectious nature of the disease will be, in a short time, absolutely proven; as Dr. Kelly pointed out, in the disease there are various atrophic changes, probably due to lesions of the central nervous system, produced by absorption of toxins from the infected joints; 5, the arthritis of gout; 6, midway between rheumatoid arthritis and the changes in gout might be placed the spinal arthropathies, although these are apparently at first purely degenerative changes.

Given a case of endocarditis with growing pains, why should we call it a case of rheumatic endocarditis? There is no possible reason, unless we accept the frequency of the occurrence of endocarditis in acute rheumatism as a proof of the relation. I believe that in pleurisy it is a great mistake to speak of rheumatic pleurisy unless it is due to tuberculous infection or is due to extension from the underlying lung. As with endocarditis, so in the case of pleurisy, the pleural serous membrane can be involved in any infection, and the so-called rheumatic pleurisy is in reality a mild infection of the pleura.

Rheumatism is not a nervous disease; the only possible reason for thinking of the nervous system in connection with it is because of the atrophies occurring in the neighborhood of the inflamed joint. Regarding the lactic-acid theory, because Richardson injected lactic acid in animals and found change in the endocardium, this theory held sway for a long time. It is now abandoned. The excess of lactic acid in rheumatism is an effect of the disease and may possibly produce some of the symptoms secondarily. Personally I believe that acute articular rheumatism is an infectious process, probably not caused by one particular organism, but by various organisms. Access to parts may be obtained through various points of entrance, that more frequently employed being the mucous membrane of the throat. I would finally make a plea for a more careful nomenclature, in regard to all of the group of lesions of joints, serous membranes and fibrous tissues to which the term "rheumatic" is now so frequently applied.

DR. J. H. MUSSER, Philadelphia—I have been well repaid for my attendance here to-day. I am somewhat in a quandary in regard to the classification of rheumatism. I feel that Dr. Packard's classification is a satisfactory, provisional one. In my own mind I am accustomed to divide joint lesions in accordance with the form of infection, which is causal. We must bear in mind that a number of joint cases have undoubtedly a toxic or chemical origin, not only the toxemia of gout, but also that due to diseases of the gastrointestinal tract. I should like to lay particular stress on the number of cases of toxic origin frequently associated with the skin lesions which are also seen in rheumatism; in this broad class of cases it is quite common to find forms of erythema associated with arthritis which are manifestations of gastro-intestinal disorder as indicated by the symptoms as well as by a physical and chemical examination of the gastro-intestinal secretions.

DR. J. M. ANDERS, Philadelphia—Rheumatism is unquestionably an infectious disease, although the infectious agent has not yet been discovered. The leading complications, endocarditis and pericarditis, are always infectious, and, I believe, they will be shown to be due to a toxin or the micro-organism of the disease. The subject of the relation of chorea and rheumatism is of special interest. I find myself in agreement with Dr. Burr when he states that they are not etiologically related, even though, as he stated, acute rheumatic manifestations may precede an attack of chorea. In my experience chorea occurs quite commonly in persons hereditarily predisposed to rheumatism. While, therefore, not in accord with the view that these diseases are specially related, it should be remembered that the period of greatest liability to rheumatism is between the years 30 and 40, and for chorea, probably between the 10th and 15th years. Both are frequently occurring affections. I believe that rheumatic attacks rarely either immediately precede or follow on chorea. On the other hand, in a much larger percentage of cases rheumatism follows chorea at a more remote period. I was glad to hear this point emphasized. He also said correctly that the endocarditis of chorea is not necessarily a rheumatic endocarditis. Endocarditis is an effect and not a cause of chorea. The diagnosis of endocarditis in connection with chorea is confessedly diffi-

cult. I think it is going too far to assume that in all cases of chorea in which endocardial murmur occurs it is dependent on an endocarditis; it may be functional. In some of my cases the heart murmur has disappeared after the chorea ran its course. Chorea is not a febrile affection, and when fever develops in connection with the presence of a murmur then we may be justified in making a diagnosis of complicating acute endocarditis. On the other hand, rheumatism is a febrile disease. Here the diagnosis of acute endocarditis as a complication rests upon the fever, a heart murmur, and a slight increase in the area of cardiac dulness toward the left, due to dilatation of the left ventricle. In a paper published a few years ago I analyzed the complications of erysipelas, and of the total number—over 200—I found acute rheumatism to be the most frequent complication, next to abscesses. The danger of mistaking acute articular rheumatism for other forms of multiple arthritis occurring secondarily to acute infectious processes, is great. It should always be borne in mind in attempting a diagnosis of rheumatism that it is, as a rule, a primary affection. In the cases in which the rheumatism is itself secondary to other infective disease it is frequently impossible to differentiate it. Still, I should like to emphasize two points: 1, secondary acute rheumatism is a rare affection, rheumatism being usually a primary disease; 2, the nature of the primary affection should be noted for the reason that it occurs more commonly after certain infectious diseases than after others. It is not uncommon after erysipelas, and I also believe that acute rheumatism does occur, though rarely, during convalescence from scarlet fever.

It is lamentable to note the number of cases of osteomyelitis that are confounded with acute rheumatism. Osteomyelitis is sometimes a subacute affection, or develops more gradually than is usual, and if not recognized early and properly treated produces marked destructive changes. The differential diagnosis between these affections is important. In osteomyelitis, as in rheumatism, we have redness, swelling and tumefaction. While these symptoms may extend clear to the joint implicated, they do not involve the articular surfaces in the early stages of the affection at least. In osteomyelitis the bone is affected and, when making bilateral pressure with the thumb and finger, there is great tenderness, not over the joint, but immediately above or below it. In a case I saw in consultation in the early stage of the affection I could flex and extend the leg gently without causing additional pain; that could not have been done in a case of acute rheumatism. This, of course, applies only to the early stages of the affection. Septic osteitis is usually a mono-articular affection; whereas, rheumatism is a polyarthritis, as a rule; at all events, acute rheumatism in the early stages is almost always a polyarthritis. Yet, one should remember that some of the joints implicated in rheumatism may be so slightly involved as to give rise to little suffering and hence may be entirely overlooked; such cases are often regarded as mono-articular from the start. It is also to be remembered that osteomyelitis may be multiple; this point is important. Fever and joint symptoms are more profound in septic osteitis than in acute rheumatism, except in the subacute cases. Sweats are less common than in acute rheumatism. The therapeutic test with salicylic acid also aids in making a differential diagnosis. It positively relieves the pain in acute rheumatism, but it has no effect in osteomyelitis. I emphasize the differential diagnosis between these two affections because, although they would appear to be surgical from the standpoint of treatment, yet it is the physician who, as a rule, is first called to see them. The question of the prevention of the cardiac disturbances in acute rheumatism is interesting. Not to detain the Section longer I will state that my own rule is to employ the combined salicylic acid and alkaline treatment. It has seemed to me that this method does obviate the development of cardiac complications, the prophylactic influence being ascribable to the alkalies. Dr. Kelly has given us a clear and elegant exposition of the pathogenesis of rheumatoid arthritis.

DR. CHARLES G. STOCKTON, Buffalo.—There seems to be a lack of certainty in considering the ground now open for discussion on the question of arthritic diseases; but the consensus of opinion seems to be that they are infectious diseases; no one in the discussion to-day has been heard to state otherwise; and it has been admitted that it probably depends on no one infection. It has also been stated that we should not regard endocarditis as necessarily the result of rheumatism. Now, endocarditis is the result of infection. Of course nearly all admit a small group of infections which produce in individuals acute affections that have a rather definite clinical history and are relieved by the administration of salicylates; and this group is named rheumatism. We agree to speak of rheumatism as a specific disease; perhaps it is. If we could regard rheumatism as depending on one influence, it would simplify matters. Have we reached that point? I think we have not. So far as we understand acute rheumatism to-day it is not always due to one particular infection. Take the other extreme and speak of chronic joint affections; there are unquestionable reasons for believing that they depend on neuropathic conditions. We may get that extreme in the Charcot's joint. Dr. Kelly has presented all we know, and as well as it could be presented, when he used the expression "neurotrophic infections." When he referred to "neurotrophic infections" I did not understand; but as he further demonstrated his position I could see that he meant that the weakness of certain structures permitted infection to find place. I think that is a reasonable position to hold. It is a position parallel to that taken in the admirable paper read yesterday by Dr. Preble. There are conditions that produce different results in different individuals, depending on the lowered resistance of certain parts. Having reached such a point of view, we may go back further and state that there are certain conditions in certain individuals called "diatheses" which influence the development of arthritic conditions. To admit some other influence besides the action of infection in producing acute and chronic rheumatism seems to be necessary. Diatheses represent some of these influences.

DR. LOUIS FAUGERES BISHOP, New York City—I believe there is a disorder of the chemistry of the body as well as infection.. I believe that there are disorders of the powers of nutrition besides infection. By classifying these disorders into certain groups we can get a better idea of arthritic affections. Take that which is most striking, acute rheumatism; this is undoubtedly a specific infectious disease. Certainly, in the spring of the year the hospital wards are filled with cases of an acute rheumatism; a disease that attacks young adults, coming on suddenly with temperature and with pain in a joint, that spreads to other joints of the patient; a disease with a tendency to endocarditis. Toward the middle of the summer many of these cases have entirely recovered without any tendency to recurrences. Such a patient may go the rest of his life without another attack of rheumatism. That is acute rheumatism and represents an infection. On the other hand, gout is a disorder of the chemistry of the body whereby insoluble urates replace soluble urates in the system. I believe that much stated about uric acid in relation to gout is a great humbug. Gout is a complex disorder of the body chemistry.

Again, there are disorders of the tissues of the body due to trophic disturbances. The nervous system is so perfect in action and so little liable to disorder that we do not realize how dependent the nutrition of the body is on the nervous system. I lately saw a case in which the trophic influence was cut off, showing how important this is. A patient developed myelitis of the lower end of the cord. In the course of a few days he had excavated ulcers over the sacrum. The myelitis cleared up and repair took place in the course of a few months. That is an extreme instance of trophic change. The nervous system sometimes becomes disordered and disturbed through other affections; for instance, in persons who have undergone shock. The general trophic powers of the nervous system are disturbed and there may be developed arthritis deformans. As the Doctor has stated in his paper on this disease, there is probably some disturbance in the trophic centers that control the joints.

Now, having clearly stated that there is an infectious articular rheumatism, that there is a disturbance of the chemistry

of the body and that there are neuropathic disturbances, then to clearly define the various arthritic cases we must consider that there is often more than one of the causes existing at the same time. If, also, we get a clear understanding of the various blood infections and if we remember that the sick are specially liable to the development of these poisons, we can explain a great many symptoms by secondary infection in the acute rheumatism, in gout, or in neuropathic trophic conditions. In reference to chorea, it would seem that, like rheumatism, it has been too definitely defined. We have Sydenham's chorea, which is fairly a well-defined disease like acute rheumatism; but there are other forms of choreic movements. It sems to me that chorea major is a different disease, and probably a disease due to some more serious infection. We have choreic movements due to other diseases than chorea; among these are septic infections. For instance, I have seen choreic movements develop after measles, having probably no connection with ordinary chorea; it was an entirely different condition. Although I have examined many hundred cases of chorea and discovered many murmurs, I believe that only a few of them were due to an endocarditis. I do not believe that chorea and rheumatism are the same disease. Rheumatism is confused with other infections, and chorea often complicates these other affections.

DR. G. W. MCCASKEY, Fort Wayne—I protest against the term rheumatism, except when applied to the definite clinical picture which we all recognize. We should drop that indefinite term in a large group of cases which have no connection with rheumatism. I wish to refer to the subject of arthritis deformans. I do not know whether to use the term infection or not; I think that it is a toxemia, the toxin resulting from some sort of germ infection gaining access to the blood and so affecting the tissues with which it comes in contact. The origin of the poison is, I think, most probably from the gastrointestinal tract. I may say in this connection that I have not found a single case in which there was no evidence of gastrointestinal disturbance or toxemia from this source. While the treatment is, perhaps, outside the scope of this discussion, yet I wish to refer to one experiment recently made by myself with cataphoresis. The negative electrode was placed over the forehead and both hands were immersed in a saturated solution of iodid of potassium in which the positive pole was placed; the current was then turned on as strong as the patient could bear it.

DR. S. SOLIS-COHEN, Philadelphia—Arthritis deformans is still something of a scrap-bag. It must further be subdivided into several classes. Acute cases chiefly affect the large joints, while the chronic cases chiefly affect the small joints. In the chronic cases there are at least two classes, those in which a spindle-shaped deformity develops and those in which lateral deformity results from exostoses. If infection has to do with arthritis deformans it is more probable that it will be found in the acute than in the chronic cases. The latter probably depend more largely on metabolic error. If Dr. Kelly will modify his formula and substitute for infectious trophoneurosis, the term toxic trophoneurosis we shall all agree with him. There is one drug of much value. That drug is the tincture of the chlorid of iron. It must be given freely and frequently. By a simple pharmaceutical device, the use of ammonium citrate may be combined with sodium salicylate; this combination seems especially useful in anemic persons and in recurrent and lingering cases. To prevent the cardiac complications, we must give an alkaline course pushed quickly until the urine becomes and remains distinctly alkaline. Why, I do not know. Methyl salicylate—oil of birch or oil of wintergreen—can sometimes be given when other salicylates are not well borne. It is a question of the individual and of care in administration. Locally these oils are sometimes very useful.

DR. D. RIESMAN—Regarding the treatment of rheumatoid arthritis I would recall to the Section a case which I reported at the Philadelphia meeting three years ago. It was a young woman who had been unable to stand or walk for seventeen months on account of rheumatoid arthritis involving, among other joints, also the knees and ankles. The knees were flexed, but by the use of extension, such as is employed for fractured femur, the legs were gradually straightened out. The apparatus was on altogether sixteen weeks. The disease was arrested and the patient was able to walk and ride on the bicycle, although for many months distinct grating in the joints persisted. I am convinced that if extension had not been employed she would have been hopelessly crippled despite the arrest of the disease. The treatment I employ in acute articular rheumatism is salicylate of sodium in large doses, combined, if the heart shows any signs of involvement, with the alkalies; and in that case the latter are given in large doses until the urine is alkaline in reaction, after which the dose is reduced. The diet consists of milk and lemonade, and the patient is kept between blankets. With respect to the etiology of rheumatism the speakers seem all to be agreed that it is an infectious disease. I believe that we shall find not only that it is an infectious disease, but that the typical disease is due to one species of microörganism—and to one alone.

DR. JAMES J. WALSH.—It is interesting to note that rheumatic endocarditis always occurs in the left heart. The blood flowing through the left heart has just come from the lungs and is freshly aerated. If the supposed microbe of rheumatism be in the blood-stream it is just at this moment after its recent exposure to the oxygen of the air that it may be considered to have taken on new vitality. On the other hand the comparative absence of oxygen in the venous blood may account for the fact that the right heart is so seldom affected. The aerobic germ of rheumatism is, in its passage throughout the right heart, in a condition of lowered vitality. The connection between rheumatism and chorea has been a matter of a great deal of dispute. One lesion is constantly found at the autopsy of chorea cases. It is a chronic endocarditis. Here seems to be the point where chorea and rheumatism touch. Chorea as we see it is really a nervous disease. Its manifestations may very well be due to an insufficient blood-supply to the motor cortex. The reason for this insufficient blood-supply is the chronic endocarditis that has been noted as occurring so constantly. The affected heart does its work very well until under the stress of over-work, over-study, sudden fright or great emotion, an excessive call is made on its energy. A certain amount of incompetency develops and in the growing child with extreme sensitive nerve cells the disturbance of circulation is first noted by its action on the motor cortex. The endocarditis that leads to this disturbance of circulation is due to a preceding attack of rheumatism, or some other infectious disease. It is well known that chorea may follow almost any of the infectious diseases. Its greater frequency after rheumatism is only due to the fact that in childhood particularly, rheumatism almost never leaves the heart unaffected. The attack of rheumatism which caused the endocarditis may have been almost latent, may have been concealed under the term "growing pains," or may have been a primary rheumatic endocarditis without any arthritic manifestations. The reason why patients who have had chorea have subsequent attacks of rheumatism is that they had rheumatism before they had their chorea, and one attack of rheumatism predisposes to subsequent attacks.

DR. DELANCEY ROCHESTER—In reference to the treatment of acute rheumatism, the use of iron is of the utmost importance. Here there is a tremendous anemia that should not be neglected. The pyrophosphate of iron is of value given in doses of 8 to 15 grains; little doses are of no value. The tincture of the chlorid of iron is of great value in doses of 15 to 30 minims. I believe that no treatment can prevent heart infection. I believe, moreover, in the rest in bed treatment, which tends to prevent dilatation of the heart. Strychnin given throughout the disease is of great value. The bowels should be kept freely open by the use of Rochelle salts. Large doses of sodium salicylate, frequently repeated, should be administered day and night.

DR. A. O. J. KELLY—In the treatment of several cases of arthritis deformans, I have observed considerable good result from the use of superheated dry air. I recall one case in particular, that of a middle-aged woman, who, in August last, was admitted to the medical wards of the Hospital of the Uni-

versity of Pennsylvania to the service of Dr. Musser. She had to be carried in, as practically all the joints of her extremities were implicated, more especially the joints of her hands and feet. In addition to repeated treatments with hot air she was given some alterative medication and a full nutritious diet. After treatment lasting for a couple of months, she left the hospital able to walk without a cane and able to do fine embroidery. That the desired results be attained, it is essential to bear in mind that the treatment with hot air must be persisted in for some time even if a dozen or more applications seem ineffectual. It may even be observed that in a few cases each of the early treatments seems to be followed by an aggravation of the pain; the mobility of the joints is, however, almost always increased. In certain cases of acute articular rheumatism this treatment is also efficacious. It finds it especial range of usefulness, however, in those cases that seemingly commence acutely with implication of many joints, but which, instead of subsiding as do the cases ordinarily, pass on to a subacute stage with especial localization of the disease in one joint, usually one of the larger joints. In the majority of cases of acute rheumatism, the first essential is to bring the system rapidly under the influence of the salicylates. Personally, particularly in persons with sensitive stomachs, I prefer the salicylate of strontium. In many cases the pure salicylic acid administered in milk will be found most effectual.

EXTERNAL DRAINAGE OF LUNG CAVITIES.*

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The subject to which I wish to call your attention is one much neglected, though very near to us all, especially to those of us who live in the regions to which tuberculous patients are most frequently sent in all stages of the disease.

Just why abscesses and cavities in the lungs should be allowed to run their course of breakdown and produce infection of the other lung and a pyemic condition of the system is hard to explain in these days of exploitation in all parts of the human body. It is partly due to the timidity of the physician in recommending, and in operating for, the relief of the suppurative process as elsewhere, but chiefly to the reluctance of the patient to submit to operation when there is yet time to do good by such interference.

Of course it would not be good surgery to subject a patient in the last stages of his disease to such hazard with such a very small chance for betterment. When satisfied that we have to deal with a septic condition, due to inadequate drainage by the bronchus and in order to save a patient's strength and life, then I claim it to be good conservative surgery of the most progressive type to drain cavities externally. I hope to be able to sustain my point by two cases operated on by a colleague and myself for the relief of this condition. Both these patients were failing rapidly from fever and sepsis, and each had one good lung, the other seriously damaged, and both were in fairly good condition for operation and willing and anxious to undergo anything that promised relief for their unfortunate condition.

From an elaborate series of experiments on rabbits, reported to the Medical Society of the State of California in 1892, I satisfied myself that the resistance of the pleura was much greater than is usually supposed, and that the lungs could be operated on with much less danger than authorities had formerly taught. I chose this animal for experimental work because of its lack of vitality, which diminished the chances of recovery, and because it would probably follow that the same operation on human lungs would be more so, if the operation on the rabbit's lung was successful. Until 2½ years ago I could not find a patient who would submit to such an operation as I wish to report to you. Several, however, talked of it, but always backed out as the time agreed on drew near. In fact, my first patient went to the hospital for the operation, grew somewhat better temporarily, then declined it and left. Afterward, however, he grew steadily worse, and in six months returned for operation. This was in March, 1898.

History—H. H. H., aged 45, unmarried, was born in California. He was 5 ft. 9 in. in height, and his usual weight ranged from 175 to 200 lbs. He was a ranchman and liveryman, a man of fine physique, with red hair, large chest, was accustomed to all kinds of labor and had been a vaquero. He had comparatively dissipated habits, no personal history of syphilis, and no history of tubercular disease in his immediate family, nor, in fact, among his more remote ancestors. His father and mother were living, aged 75 and 70 respectively, and he had brothers and sisters all well and vigorous, of good size and physical strength.

In October, 1896, having been unfortunate in farming operations, he came to the city, did not find work, was badly lodged and fed, and rapidly ran down in flesh and strength. Then, on December 17, he presented himself with evidences of pleurisy on the left side. The salicylates were exhibited under the impression that the pleurisy was of rheumatic origin. The treatment reduced the temperature and relieved pain; however, after about a week or ten days, evidences of effusion were present within the left pleura cavity. Salicylates were continued and iodid of potassium given, and with repeated counter-irritation. The effusion gradually disappeared, as well as the pain and discomfort, and the patient was to all appearances restored to health.

Believing himself to be in good physical condition, he accepted a position as foreman in charge of hydraulic placer mining operations, and this, during the winter, exposed him to all kinds of weather, and also led to constant wetting. The following August the second attack occurred, confining him to his tent for about three weeks, and during this period, according to his statement, he suffered from high temperature and pain on the side previously involved. It might be well to state here that these attacks of pleurisy were not preceded by any pain or inflammation about the joints, and so it was probably tubercular from its inception.

On August 30, 1897, the patient was brought to my office by his physician, Dr. Shorb, suffering from laryngitis, emaciation and cough. He gave the history as above, and stated that during a ride of some twenty miles, over rough mountain roads, a sudden vomiting of about 1½ pints of pus took place, and with this venting a relief of pain.

Physical Examination.—He showed marked emaciation, large frame, good chest development, and, on inspection, impaired respiratory movement of the left side—rapid breathing, his respiration being about 24 to 30 per minute. His fingernails were clubbed on the left hand and the matrix showed evidences of imperfect oxidation. On palpation, there was impaired resonance and increased vocal fremitus at the apex. The lower lobe of the left lung, at a point over the lower end of the scapula, had all the characteristic signs of cavity. There was also, in the apex, a condition either of small cavity or an area of consolidation. However, there existed no question as to the larger cavity. This latter, approximately, extended from the sixth interspace to the ninth rib, and apparently from the spinal column to the mid-axillary line.

The patient gave a history of dyspnea and orthopnea, with vomiting of from half to one pint of pus every morning. Examination of his sputum showed the presence of tubercle bacilli with elastic fibers, etc. He was induced to go to the County Hospital for an operation, and after his admission, showed marked septic symptoms, with a temperature ranging from subnormal in the morning to 101.2 in the evening; he also suffered from night sweats.

* Presented to the Section on Surgery and Anatomy, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

Operation.—A consultation was held and resection of the ribs for external drainage of the lung cavity advised. He was put on tonic treatment and given large doses of creosote for several weeks, with such improvement in his general condition —an increase of 15 pounds in weight—that he declined operation. He remained in the hospital three months, and during this time the amount of expectoration lessened, owing to good medicinal treatment and the creosote, but the septic conditions continued. He gained in weight but not in strength. At the expiration of the three months he returned to his home in San Jacinto, a town in the San Jacinto Valley, inland, 100 miles from the coast and with an altitude of 1500 feet. He remained there until March, 1898, gradually losing ground gained by the former treatment. During the last week of this month his condition grew so serious, and he was expectorating such large quantities of pus continuously, that he came to Los Angeles for operative relief. There an interesting condition was discovered. When first admitted to the hospital, I had intended to make a resection of the seventh and eighth ribs in the posterior axillary line, but after his return an inflammatory area was noticed extending over the fifth, sixth and seventh spaces from the anterior axillary line forward to and below the left nipple, which suggested the advisability of interfering at this point instead of carrying out my original plan. It was red, painful, bacon-like, and presented all the signs of a suppurating focus. The most natural supposition, therefore, was that the abscess had ruptured into the pleural space, and was approaching the surface at this spot. The patient's general condition was bad, temperature 104, heart's action enfeebled, breathing labored and his condition demanded prompt relief.

I made my incision over the sixth rib, in the anterior axillary line, and resected a piece 1½ inches long, found the pleura thickened, the lung very much congested, and even fingered the apex of the heart; but to my chagrin, on opening the pleural cavity, I found not one drop of pus. The patient's condition was so precarious that the operation was cut as short as possible and a large rubber drainage-tube sewed in the wound. Ether was used and, though skillfully given, he almost collapsed on the table, preventing the completion of the contemplated operation, which was to resect more ribs and enter the lung cavity and establish free drainage.

He reacted fairly well, and under bold stimulation passed the eight days following the operation uneventfully, with absolutely no expectoration, though the temperature was extremely irregular. On the morning of the ninth day, the patient was almost choked by a sudden gush of pus, intensely fetid and gangrenous in odor, through the trachea into the mouth, and it also poured forth from the wound. With this free external drainage established through the incision, which continued for months, abnormal temperature instantly ceased, and it remained normal thereafter, septic symptoms only appearing when the free drainage through the incision was interfered with. The patient became so offensive that it was necessary to remove him from the general surgery ward to an isolated room. Dressings had to be changed several times daily. Irrigation with large quantities of bichlorid of mercury solution, 1/4000, were used twice daily; the patient having unusual tolerance for this germicide, derived great benefits therefrom, and never showed any poisonous results from its use. This suppurative process continued for sixteen months, gradually diminishing.

The cavity was opened externally and had a connection with the left bronchus, as evidenced by the taste of the irrigating fluids. The patient did not gain strength during the warm weather of the summer and was losing ground every day, so decided to go back to the San Jacinto Valley in September, 1898. During the summer sinuses formed in front of the incision, following the line of the ribs and cartilages forward almost to the sternum. These were opened and curetted and finally healed. He remained at home, gained strength and cared for himself. He would fill the cavities with a strong solution of $HgCl_2$ once or twice daily, by placing himself in a recumbent position, thus retaining a quart of this solution for several hours, when he would rise up and allow it to flow out through the opening in the chest wall. This he did without the knowledge and advice of his physician. The cough gradually diminished until August, 1899, when it stopped entirely, as did the expectoration.

The patient was not seen by his physicians from September, 1898, till December, 1899, although they heard from him at long intervals. He came to Los Angeles and was carefully examined on Dec. 13, 1899. There was absolutely no sign of cavity, only sounds of a consolidation in the left lower lobe and bronchial breathing over the left apex. He is able to work, chop wood—had put in forty acres of grain—can ride horseback, and feels better than for years. He experiences pain only when he stoops over. He has put on 75 pounds of hard, sound flesh since he first came under our care three years ago.

This operation was simply a resection of one rib—the intention was to take out two or more, but respiration was so shallow and the condition so alarming that the operation was hastily completed, a chance for drainage only being possible. After the acute congestion produced pus, the abscess in the lung ruptured in the direction of least resistance, and the pus gushed forth up through the bronchus and out of the wound in the side. Gravity drainage through the chest wall rendered coughing unnecessary.

Undoubtedly the climate and surrounding conditions had much to do with the improvement of this patient, and he might not have recovered at the County Hospital. On the other hand, he had absolutely no attention for sixteen months, other than that given by himself. The pus simply ran out through the incision, and he washed, irrigated and dressed his wounds as he had been taught and as best he could for himself. It is a remarkable case, and well worth considering, even if what was intended at the outset was not entirely carried out owing to the man's dangerous condition while being operated on. The man had bacilli in the sputum and was in a desperate condition and the beneficial effect of the strong solution of $HgCl_2$ on the suppurative process is well worth considering.

Case 2.—M. L. D., aged 30, married, by occupation a traveling salesman, for a number of years had been exposed to all sorts of weather in northwestern Iowa, poor hotel accommodations, irregular hours. His family history was negative as regards a tuberculous taint, his parents, two sisters and one brother living in good health.

He enjoyed perfect health, weighing 128 pounds on an average until two years ago, when he had an attack of pleurisy on the right side. This occurred in July, 1898, and he was laid up two or three months. His recovery was gradual and he returned to his work, but a dry, hacking cough remained with no expectoration. In April, 1899, he began to expectorate freely, and for the first time was told that his lungs were affected, tubercle bacilli being found in the sputum. He immediately went to Chicago and consulted Dr. John B. Murphy, who also found tubercle bacilli. Dr. Murphy advised against the use of nitrogen gas in his case and recommended Colorado as a health resort. The patient returned to his home in Iowa and, in the following month had a second attack of pleurisy on the same side. He was ill six weeks and convalesced slowly. This time he was expectorating freely, suffering severe pain in his right side and having night sweats. Under the judicious use of morphin the pain was controlled and he gained 14 pounds in weight before coming to California. In July, 1899, at a weight of 114 pounds, he came to Los Angeles, and put himself under the care of Dr. J. de Barth Shorb.

Physical Examination.—Inspection showed the characteristic phthisical chest. There was no evidence of increased vocal fremitus or vocal resonance, but dulness was slightly increased over both lungs. Percussion and auscultation discovered a cavity which extended from the end of the scapula as far down

as the last rib and from two inches to the right of the spinal column to the mid-axillary line, on the right side. Auscultation revealed fine crepitant râles in the apices of both lungs and evidences of bronchitis. There were evidences of compression of the right lung above and in front of the cavity already mentioned. Expectoration at this time was scanty, averaging probably a teaspoonful in twenty-four hours. The temperature varied from subnormal to 103, and the patient progressively lost in weight. He was advised to submit to operation for the purpose of draining the cavity in the back at its most dependent part.

Operation.—This was performed at 9 a.m., Jan. 11, 1900, at the Good Samaritan Hospital, several physicians present, and after careful preparation for several days. Ether was the anesthetic. Section was made over the angle of the eighth and ninth ribs on the right side, three inches from and parallel to the spine. The incision was four inches long, two inches of each rib was removed forward of the angle, no vessels except those of the skin being opened, and the periosteum and nerves pushed out of the way. The patient took ether badly and I was obliged to hurry, so hastily opened the pleura and found I was just behind the posterior edge of the cavity's adhesion to the chest well. The man's condition prevented extension of the wound forward. The pleura was carefully but hastily examined and found to be perfectly healthy and smooth. An attempt was made by both of us to push the index finger into the cavity, which could be distinguished by feel, considerable force being used, but the wall was too strong, both of us being sure of its existence, though not daring to use the knife as we had intended. There was absolutely nothing in the pleural sac. The lower lobe collapsed behind and below the adhesion over the cavity to the ribs, as above noted.

Operators were much chagrined that the cavity was not opened directly as planned, but the prolongation of the operation meant death to the patient, on the table, so the pleural sac was hastily wiped out with sterile gauze and the skin wound closed with silkworm gut interrupted sutures as quickly as possible, without drainage; a thick, firm, gauze compress and dressing was applied. The intention was to operate again farther forward. The patient reacted well.

On January 17, six days after operation, the temperature was 103 F. We removed the stitches, the wound being perfectly healed and dry but the skin distended; fluctuation was noted. The skin wound was opened freely and nearly two pints of brownish, fetid pus gushed forth. On digital exploration, the finger entered directly into the lung and discovered a large cavity, location and size as diagnosed. The wound of the pleura and cavity of the lung was irrigated thoroughly with weak formalin solution and sterile water afterward, and the cavity packed with sterile gauze, the lower level of the pleural sac walled off from the general sac and pleura, washed and dressed daily as indications required. On Jan. 18, the temperature dropped to 97.5 and then went up to 98.4, and on the 19th to 99. There was much pus, but the condition was improving. On January 28, we withdrew all gauze; there was little discharge, and granulating at the bottom, the man doing well, with a pulse and temperature slightly above normal. By January 29 he was improving every day.

The bruising of the pleura by the fingers in the attempt to enter the lung cavity produced, by ulceration, the connection with the external incision desired and gave the gravity drainage sought. Undoubtedly the pleura was the better prepared for its fetid bath by the handling it received and the consequent inflammation and covering of its surface with lymph. The improvement in pulse and temperature is good evidence of this and proved the desirability of and justified the operation.

Immediately following operation, and with the establishment of drainage posteriorly, the patient's condition began to improve. His temperature went down and his appetite and strength increased. Within a month following operation there were evidences of communication of the cavity with the bronchial tubes, as shown by the coughing up of pus on three distinct occasions and the ability to taste the irrigating fluids.

Since this I regret to acknowledge that the patient has not continued to improve and there is marked evidence of involvement in other parts of the same lung, and he is losing strength and weight; but the operative wound through the chest wall into the abscess cavity is still open and discharging a very small quantity of pus.

These cases are unique in many respects: 1, from the fact that the patients had been given up to die, both being tuberculous, as demonstrated by the physical condition and by the microscope; 2, in consenting to operation; 3, in behavior under the anesthetic (ether) due to impaired respiratory power; 4, immediate improvement after operation, as to temperature, pulse, cessation of fever and cough and no expectoration of pus as soon as pus drained through the external wound; 5, while in both cases the condition prohibited the completion of operation as planned, still indirectly the purpose of operation was attained—having by interference established a point of least resistance for the abscess to rupture and discharge its contents.

These cases were very different in history, physical strength and other characteristics, the chief difference being that in the first there was a direct communication between the abscess cavity and the bronchus, and in the second case no apparent vent existed at all, and in each case the patient was dying as a result of absorption of septic matter, and prompt surgical interference was suggested as the only means of relief. In each septic symptoms ceased as soon as external drainage was secured.

In the first case reported the condition was not one of empyema, because there was absolutely no pus in the pleural space when it was opened, and not until the consolidated area about the abscess cavity broke down and ruptured in the direction of the least resistance, viz., toward the incision in the chest wall, was there any pus. That there was a damming back of pus is proved by the cessation of cough and expectoration for eight days after operation, and then suddenly the patient was nearly choked by a gush of intensely fetid pus upward, while at the same time pus flowed in quantity through the incision in the chest wall, and so continued to do, whereupon the cough ceased and also the expectoration, showing that gravity drainage was effectual. The patient, while much exhausted and run down, gained slowly and steadily and, having the best climatic conditions, recovered. Had he remained in the County Hospital among tuberculous patients he would have almost certainly succumbed to the disease.

The second case is as good a test of this mode of treatment, by reason of his less vigorous physique and long exposure to the sudden changes of Iowa and Nebraska and the greater progress of disease and the naturally depraved fiber of the man. If this patient, who is convalescent now, does not recover he will have demonstrated the correctness of the theory of this mode of treatment just as well as does Case 1. This man's septic symptoms stopped at once, his temperature fell, he did not cough, was more comfortable and gained weight slowly but steadily, leaving the hospital at the end of the eighth week. He is now under the care of my colleague, Dr. Shorb.

Both patients took the anesthetic—ether—badly and almost collapsed on the table. In each, owing to bad general conditions, the operation could not be completed as planned, and in each, owing to the handling and exploring with the finger as much as we dared, we accom-

plished indirectly what we otherwise would have done had the patient borne prolongation of the operation well. The fact that we did not do and find what we expected does not detract from the merits of the operation and the benefits to the patients, and we shall always feel that we did the correct thing and are ready to do the same operation again for similar conditions, only hoping it may not be necessary to hurry or change plans.

A half-completed operation is better than a dead patient, and the beneficial results from the half-finished and changed plan of operation are just as satisfactory to the patient if not to the operator. These patients knew exactly what they had to expect—discomfort, suffering and certain death under the usual let-alone or round-about medicinal plan of treatment on the one hand, and a slim chance for betterment by the proposed operation on the other. The second patient was being examined in my office when the first came in, looking so robust and well that these men, the one recovered and the other considering the same plan of treatment, were introduced to each other and had many talks before the second consented to operation, and that he did so was only due to the proof of benefit exhibited to him by the other's recovery and his satisfaction with operative treatment.

I wish to acknowledge my indebtedness to Dr. J. de Bart Shorb, of Los Angeles, for his valuable suggestions and assistance in the treatment of these patients.

DISCUSSION.

DR. JOHN B. MURPHY, Chicago—The purpose of drainage of the chest is a very important one, but I will not go into the objections attending it. The methods of drainage are two, internal and external. We can either drain the abscess through the bronchi or an external opening. We drain through the bronchi where we have no adhesions, but where we have adhesions the life of the patient would be jeopardized. If we make an incision into the chest cavity we immediately have the entrance of air. Through the opening you can grasp and palpate the abscess. Unless great care be used you are likely to have a septic pleurisy develop. You have an operation that can be performed with comparative safety, which is that of compressing the lung, allowing the pus to escape through the bronchus. You can also puncture the chest and allow the patient to inspire air. About 170 cubic inches of air may be aspirated, and the patient can have his chest filled every third day if you wish to hasten the process. There is no inconvenience from air taken in that way. Of all the injections of air into the pleural cavity we have had but one accident, and that was where the needle was inserted while the tube was connected. I never have the tube connected when I wish to insert air into the chest. By this method you can fill air into the chest and drain the cavity effectually, but in cases of adhesions this is impossible. Many surgeons fear to open the chest, but their fears are groundless. You can palpate the lung just as well as you can palpate in the pelvis, and you can locate your abscess exactly. Do not make the mistake of endeavoring to reach it with a Paquelin cautery, for you will find the lung will retract in the chest out of reach of the cautery, unless an incision be made in the chest wall large enough to enable you to seize the lung or unless it be adherent. You will have less oozing in these cases than you might think for, but the abscess will heal perfectly.

DR. LE MOYNE WILLS—Of course we have the advantage of a dry climate, which means a great deal in these cases; otherwise my patients would almost certainly have died. The second case was operated on only last January, while the other case was operated on two years ago.

The first case spent fifteen months, after leaving the Los Angeles County Hospital, in the San Jacinto Valley, in the open air, at light work, and was undoubtedly greatly assisted in his cure by climatic conditions. Had he remained in the County Hospital he would certainly have died. You do not have the opportunity to place your patients in such an atmosphere. These are not the kind of cases you see, whereas we see many of them.

I have experimented on rabbits from time to time since 1892, and have learned much from my work. My patients had the courage to consent to, and go through with, the operation and are perfectly satisfied with the result, although the surgeons may not be. The second case is not likely to live long, but is much more comfortable and will live longer than he otherwise would have done, without external drainage. The first man practically got well by over-flushing with a strong solution of mercury bichlorid, for I really believe the bichlorid did it. He is doing manual labor, keeps up his weight and strength, and is perfectly satisfied. I hope to be able to continue this subject at a later date.

SURGICAL ERRORS IN SKIAGRAPHY.*

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The ease with which some small bones of the human body can be reproduced by the Roentgen rays on a photographic plate led many medical novices, and even ignorant laymen, to the indiscriminate use, or rather abuse, of the rays.

For the ignorance of unskilful operators many distorted Roentgen ray pictures are responsible. Some of them caused such fatal errors that even well-experienced medical men felt a great disappointment in the results. But in considering all these errors, some of which were indiscriminately heralded through the medical as well as the lay press, it becomes evident that the Roentgen rays never lie, but that it is entirely our own imperfection which induces some of us to err under peculiar circumstances.

In the first place, we should never forget that a so-called Roentgen-ray picture is by no means an ordinary photograph of an object, but a silhouette only (skiagraph), i. e., a photograph of its shadow. To interpret such shadows properly a thorough knowledge of the normal anatomic relations of the tissues, especially of the bones, that produce such shadows, is required. As the most minute gradation of density is registered, the importance of being thoroughly acquainted with the anatomic relations of the bones producing the doubtful shadow is obvious, and for this purpose it is necessary to have the pictures of the shadows of the normal structures of the body always at hand for comparison.

There are slight irregularities of the surface of normal bone, which we could neither recognize nor appreciate before the Roentgen rays were discovered. Their shadows may at first sight appear to represent pathologic processes, but prove to be normal by thorough comparison with a normal skeleton. On certain portions of the normal skeleton the muscles and tendons would naturally cause obscure shadows. The carpus is especially likely to produce such errors in the skiagraph; the tuberosities of the trapezium, the scaphoid, the hamulus ossis hamati, the os pisiforme, and the eminentiæ carpi volaris radialis and ulnaris double up the thickness of the carpus, thereby causing dark shadows which might be mistaken for foreign bodies. Similar considerations and similar cautions apply to the other diagnostic opportunities offered by the rays.

If a skiagraph of the human hand is taken, for instance, the plate will show the least light where the bones rest, while the soft tissues appear opaque. There is also a difference of opacity according to the thickness of the tissues, their blood-supply, and their air capacity.

* Presented to the Section on Surgery and Anatomy, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

The foot, while easily skiagraphed in the direction of the dorsum toward the planta pedis, from the toes up to the upper third of the metatarsus presents an obstacle farther backward in the first and third cuneiform bones and the scaphoid, so that it is necessary also to skiagraph the foot on these portions transversely by having the outer surface rest on the support. It is by this procedure only that the isolated shadows of the astragalus, the calcaneum, the os cuboidum, the scaphoid, and the fourth and fifth metatarsal bones can be distinctly outlined, so that false interpretations may be excluded.

In the early era of the Roentgen rays the normal sesamoids were also sometimes incorrectly interpreted.

How important the knowledge of minute anatomic detail is, especially of non-pathologic abnormalities, will be evident from the fact that the os intermedium cruris —os trigonum tarsi—has been mistaken for a fragment severed from the astragalus. This bone is a typical part of the tarsus of all mammalia, and is estimated at from 7 to 8 per cent.

Shepherd, who mistook this bone for a fractured fragment, says: "The fact that this fracture is not mentioned in any of the text-books of surgery or in special treatises on fractures would easily be accounted for by its only being discovered by dissection; it causes no deformity, and the symptoms it would give rise to during life would probably be obscure." The same author tried to produce this fracture artificially on the cadaver, but "in every case," he says, "where this manœuver was performed, I failed, even when the greatest force was used, to break off the little process of bone mentioned above." Pfitzner regards the os trigonum tarsi as an integral part of the posterior process of the astragalus in the adult, which is analogous to the os intermedium antibrachii.

The practical significance of this bone is evident from a case described by Williams, which is also highly interesting from a medicolegal standpoint: A laborer claimed that he was injured by an iron bar, on Jan. 20, 1897, but was able to work during the whole day, but the following day he called on Dr. Wilmans, complaining of intense pain at his internal malleolus. He limped and emphasized his inability to work. Dr. Wilmans found a slight swelling below the right internal malleolus. Ecchymosis of the skin being absent, the swelling was attributed to the presence of a considerable degree of talipes, from which the laborer suffered at the same time. The leg was elevated and fomentations were applied for several days. The laborer still complaining of great pain, it was decided to transfer him to a hospital for observation. When discharged, after several weeks of treatment, he made an effort to resume work, but at once declared that he was unable to keep it up. He was therefore admitted to another hospital, where he repeated this maneuver several times during a period of six months. Finally he claimed damages for having been crippled by the injury sustained on the date above, but in view of the negative objective condition found by Dr. Wilmans, the society decided not to grant any claims. The consequence was that the laborer was transferred to the surgical division of a third hospital for further observation. There he complained that he had continuous pains below the right external malleolus, even while in the recumbent position. The pain increased while walking or sitting. Stepping on the right heel, he also declared to be impossible. By distracting his attention, however, it was noticed that he could stand well on his heel, and he would undoubtedly have been declared a malingerer had not the Roentgen rays, mirabile dictu, come to his rescue, at least temporarily, for a skiagraph showed a bone-fragment at the junction of the astragalus with the posterior surface of the calcaneum. On the strength of this skiagraphic "proof," Dr. Wilmans, although still mistrusting, was forced to modify his original opinion, and certified that the patient suffered from "fracture of the astragalus, in consequence of which he was damaged for life." The laborer therefore received an annuity of 30 per cent., in proportion to the estimated curtailing of his wages.

Soon afterward the laborer was discovered by Dr. Wilmans carrying a heavy load without any apparent pain, while formerly he had claimed to be unable to walk without a cane or a crutch. The Doctor insisted on a second irradiation, this time also skiagraphing the uninjured left foot. The skiagraph showed the "severed bone-fragment," which had first been regarded as a sesamoid of the musculus flexor longus hallucis, but which was now recognized as a normal os intermedium cruris. The society, of course, refused the annuity, and the German Supreme Assurance Court, to which the laborer had appealed, not only sustained the verdict of the society, but also decided that the laborer must return the annuity which he had unjustifiably enjoyed for eighteen months.

The significance of a skiagraph for the purpose of estimating the degree of functional disability is not always conclusive. A skiagraph may show a considerable degree of bony deformity after a fracture, and still the function may hardly be disturbed at all. Skiagraphic test has shown that, as a whole, even our best functional results show by no means an ideal union. An unscrupulous patient who secures possession of a skiagraph of his own case which shows considerable deformity, may, although there is no functional disturbance, strongly appeal to a jury on the strength of his skiagraph, if he succeeds in simulating great impairment. On the other hand, there may be but little evidence of bone-injury on the skiagraph, but there may be severe impairment of function on account of the injury to the soft tissues—circulatory, trophic or inflammatory disturbances—which can be represented only faintly, if at all. This shows the necessity of considering all the other clinical symptoms in connection with the skiagraph.

While it is easy, even for a layman, to understand the significance of most skiagraphs, there are, as alluded to, injuries the correct interpretation of which presupposes, besides thorough anatomic knowledge, the greatest care and a vast amount of experience as to the different modes of delineation in various projection-planes. The greatest diagnostic difficulties are offered by the joints. The more complicated a joint is the more complicated the skiagraphs of its various positions will naturally appear. It is especially the elbow-joint and hip-joint which are kept in view. First of all, the interpretation of the displacement caused by supracondylar fracture of the humerus and the deformities resulting from it later on, may tax the power of discrimination considerably.

The older the fracture, the less conspicuous the fracture-line will appear, since it will be more or less overshadowed by the callus. In old fractures the lines can not be represented as such, and it is only in case of union in a displaced position that its features could be guessed. In one of my cases, for instance, a second skiagraph was taken three years afterward, which showed essentially the same features as the first one, which had been taken four weeks after the injury.

In the case of the entire absence of displacement, it is

only a very distinct skiagraph that shows the line clearly. It is natural that in such cases there is no skiagraphic evidence after recovery—that is, in from four to ten weeks, according to the type of the fracture.

If such a case fails to be skiagraphed shortly after the injury, no evidence of the fracture may be subsequently obtained. On the other hand, callus formation may be so abundant that, in spite of the absence of displacement, the fullest evidence of fracture may still be furnished months after. In one of my cases callus formation was so excessive that the attending physician was accused of malpractice, and it was the skiagraph only which convinced the patient that his physician had treated him correctly, the bones being in perfect apposition.

The intra-articular fracture types offer the greatest diagnostic difficulties, inasmuch as the fracture-line is also obscured by the callus formation. If, however, a skiagraph of the other joint is made at the same time, in the same position, and in the same projection, the various delineations of the shadows will be correctly understood and inte. preted.

A normal skeleton should always be compared on the skiagraph. It should particularly be remembered that certain pathologic conditions—such as rachitis, for instance—influence the outlines of the bones and may deceptively be supposed to represent a portion of an injury. In such an event the skiagram of the fellow-extremity will set matters right.

In very young children the eminentia capitata appears as if entirely severed from the humerus, although the relations are absolutely normal. The explanation of this very important phenomenon is that the epiphyseal tissues are not sufficiently ossified to produce a shadow on the plate. If these points are not thoroughly considered, a displaced fracture-fragment might be erroneously diagnosticated.

Union between the epiphysis and the diaphysis of the head of the humerus is not perfect before the twentieth year. The lower epiphysis of the humerus consists of four nuclei, which do not ossify before from the eighth to the seventeenth year. The epiphyses of the trochelea, as well as of the olecranon, do not ossify before between the seventh and twelfth years, which explains why an osseous nucleus that is still connected with its neighboring epiphyseal nuclei, and the diaphysis by cartilaginous tissue, appears as an isolated piece of bone which might erroneously be taken for a fragment. The acromio-clavicular junction sometimes shows, in the skiagraph, a hiatus the width of a finger, so that a diastasis of the joint might be assumed. But since our knowledge on this new subject has increased, we know that this apparent diastasis is by no means pathologic, and that there is a normal gap between the osseous ends of the acromion and the acromial end of the clavicle. The upper epiphysis and the diaphysis of the radius unite between the seventeenth and the eighteenth year, and its lower epiphysis and the diaphysis join in the twentieth year. During the early Roentgen era the translucent space above the epiphyseal cartilage in children was erroneously taken for a fracture-line. The head of the femur unites with the diaphysis at the eighteenth or nineteenth year and the lower epiphysis follows after the twentieth year. The upper epiphysis of the tibia unites with the diaphysis in the twentieth or twenty-second year, while the lower tibial epiphysis unites with the diaphysis between the eighteenth and the nineteenth year.

For the thorough interpretation of skiagraphs in children, it is important to know that at birth the diaphyses of the radius, the ulna, the metacarpal bones and the phalanges are ossified, while their epiphyses, as well as the whole carpus, are still cartilaginous. It is not before the seventh year that an osseous nucleus shows at the lower epiphysis of the ulna. Union with the diaphysis sometimes begins with the twelfth year, but, as a rule, not before the fifteenth. Even then a small epiphyseal disc remains, which does not disappear before the seventeenth year in the female, and not before the nineteenth in the male.

The osseous nuclei of the carpus show at different periods, viz., at the os capitatum, at the fourth month; at the hamatum, at the fifth month; while the triquetrum shows its nucleus between the second and the third year, the lunatum between the third and fifth, the naviculare between the fifth and the seventh, the trapezium and trapezoid between the sixth and the seventh, and the os pisiforme between the eleventh and the fifteenth year. After five years the capitatum, hamatum and triquetrum have assumed their regular shapes, while the others, with the exception of the pisiforme, are perfectly developed at the twelfth year.

The osseous nuclei of the epiphyses of the metacarpal bones show at the second year, their synostosis with the diaphysis taking place between the twelfth and the seventeenth year in the females, and at the age of 19 in the male. The epiphyseal nuclei of the phalanges are ossified between the fourth and the fifth year, their synostosis with the diaphysis taking place at the same age as that of the metacarpal bones—from the twelfth to the seventeenth year in the female, and between the sixteenth and the nineteenth in the male.

Regarding the elbow-joint, it must be considered that an osseous nucleus appears at the medial side of the capitulum humeri between the second and third year, another one in the internal epicondyle at the fifth year, a third in the trochlea between the eleventh and the twelfth, and soon afterward a fourth in the external epicondyle. The nucleus of the internal epicondyle unites with the diaphysis between the sixteenth and the twentieth year, but the other three nuclei form a synostosis among themselves at the seventeenth year and then form the uniform osseous epiphysis, which completes its synostosis with the diaphysis at about the twentieth. In the capitulum radii an osseous nucleus appears between the fifth and seventh year, and in the olecranon between the sixth and the eighteenth, both uniting with the diaphysis between the twentieth and the twenty-fifth and between the sixteenth and the twentieth year.

Regarding the knee-joint, it must be considered that the lower femoral epiphysis contains an osseous nucleus at birth, while the nucleus in the tibial epiphysis shows shortly afterward. At the fourth year both these epiphyses have completed their development, but they do not unite with the diaphysis before the fifteenth year. The anatomic text-books say that union takes place between the seventeenth and the twenty-fourth year, but a skiagraphic experience points to an average period of only sixteen. The osseous epiphyseal nucleus of the fibula appears between the second and the fifth year, and unites with the diaphysis between the eighteenth and the twenty-fifth, but the skiagraph dates this period earlier, viz., the fifteenth year. The osseous nucleus in the tibial spine appears between the eighth and the tenth year; the epiphyseal line disappears between it and the diaphysis at the fifteenth.

As to the bones of the foot, it may be said that the lower epiphyses of the tibia and fibula show their osseous nuclei in the first and second years, and unite with the

diaphysis between the eighteenth and twenty-fifth; according to skiagraphs, as early as before the eighteenth year. The osseous nucleus of the astragalus and calcaneum appears intra-utero, that of the cuboid shortly before or after birth, that of the cuneiform bones between the first and the fifth year, and that of the os naviculare from the first to the fifth. The osseous nuclei of the metatarsal bones and the phalanges appear from the second to the tenth year, and unite with the diaphyses between the sixteenth and the twenty-second.

In elbow-joint fractures occurring in childhood it is necessary, therefore, to take at least two skiagraphs in different projection-planes and to compare them thoroughly with the normal fellow. In a case of fracture of the femoral head, for instance, the deformity had appeared three times as large as it actually was, on account of inappropriate projection. The degree of shortening of the limb was accordingly overestimated. This shows the necessity of considering the other clinical symptoms and data in connection with the skiagraph.

In fractures of childhood it should also be remembered that the process of ossification is influenced by various affections of the bone, as, for instance, in rickets.

How important the question of projection is becomes evident when we consider that grave errors may sometimes occur even if all the preliminary conditions required for a thorough understanding of the case seem to be fulfilled. This will appear from the following experience, which has probably not been paralleled in the literature of this subject:

A boy 4 years of age, while playing in the street, fell against an iron bar. Being unable to rise again, he was taken up and carried to St. Mark's Hospital, where the first instance of moderate pain was noted, besides the functional disturbance. There was no difference in level nor any other deformity, nor any shortening, nor the typical equinus position. A photograph taken two days after the injury only showed a very moderate and uniform swelling of the leg. Abnormal mobility and crepitus in accordance could be produced only by very rough manipulations.

On the day following the injury two skiagraphs were made, one in the dorsal and the other in the lateral position. To my surprise, the one which had been skiagraphed by a direct irradiation, the center of the platinum disc of the tube being perpendicular to the anterior surface of the leg, did not show the slightest indication of fracture, while the one which represented the leg irradiated from the outer aspect of the tibia showed a marked fracture-line. The fracture presented the typical oblique type in the middle of the tibia, the fracture-line running from anteriorly to above posteriorly, the upper, tapering fragment overlapping the lower end. No sideward displacement having been present, it can be understood why the rays reaching the long axis of the tibia in a vertical direction did not show the fracture-line. A very slight change in position, where the inclination toward the fibular direction amounts to less than 1 millimeter, brought out the fracture distinctly. If I had, as is the custom in general, taken a skiagraph in the anteroposterior direction only, and if the manipulations made during the first examination had been carried out as gently as they properly should be, the fracture might have been overlooked entirely. And if, in view of the local pain and tenderness, the swelling and the functional disturbance, the possibility of a fracture had been seriously considered, the skiagraph might have silenced the uneasy conscience. This experience teaches the necessity of adopting the principle of always taking at least two skiagraphs in two different positions in all cases of suspected fracture.

In taking skiagraphs of foreign bodies it must be considered that their size varies according to the distance from the tube. In oblong bodies great errors as to their extent may be committed. Once I was very much surprised in a case where a needle-fragment had entered the palm of the hand in a perpendicular direction. The plate, while indicating the presence of the needle, distinctly created the impression that the fragment was only about 2 millimeters in length. When extracted it was found to be more than an inch long, the rays having reached the hand in a perpendicular direction so that the circumference of the fragment was reproduced rather than its length. A side view would have cleared up the error at once.

Misinterpretations have also arisen from unavoidable mechanical and chemical effects, causing markings in the photographic plate, the significance of which must be well known to the skiagraphic interpreter. Blemishes may also be produced by spots caused by pus from wounds or by perspiration. In the location of foreign bodies, especially in the skull, many errors were and are still committed. Their avoidance will be considered in a special article.

DISCUSSION ON PAPERS OF DRS. BECK, LEONARD AND DAVIS.*

DR. HOWARD KELLY, Baltimore—Dr. Leonard has presented a remarkable paper, and I feel sure he is doing the finest work of this kind. I have had a chance to test his skill in several cases of calculi. I had supposed until recently that in the female I had occupied this field pretty much for myself by making a diagnosis by slipping into the kidney my wax-tip bougie and finding the scratch marks on it when a stone is present; but recently I have had two cases in which I have been unable to detect the presence of the calculus in the kidney by this method, and in one of these cases Dr. Leonard cleared up the diagnosis. A patient came to me with a renal calculus on the left side, and on catheterizing the kidney I drew off a small amount of urine containing pus, but got no scratch marks. I then catheterized the other side simply to ascertain its condition, and there I unexpectedly got the scratch marks on the bougie. I therefore had a pyonephrosis on one side and calculus on the other. I passed the catheter a second time and got scratch marks again. Dr. Leonard happened to be in Baltimore at that time and took a skiagraph which located a calculus also in the side first tested. I operated first on the worst side and ten days ago on the other side. We must all learn to do this work as Dr. Leonard does it.

To facilitate end-to-end anastomosis of the ureter, I have invented what I call an anastomosis guide, which is shaped like a long thin cartridge with a long handle to use it. I slit the ureter above the division and slip in the guide and bring the ends together and suture them over the guide. The ureter can be anastomosed into the bladder in the same way. It is sometimes necessary to make a long anastomosis of the ureter into the bladder, as shown by some of my cases. I remember a patient in whom a carcinoma obstructed a ureter. I brought the ureter into the bladder by devising a plan which originated some years ago by simply freeing the bladder from its attachments and pulling it up until it reaches the ureter; the bladder was then retained in this extreme displacement by suturing it to the psoas muscle on level with the posterior border of the pelvis. By this means I have secured a perfectly satisfactory anastomosis.

DR. A. D. BEVAN, Chicago—I want to congratulate Dr. Leonard on the very fine work he has been doing. Some of the early work in finding renal calculi by means of the X-ray was done by Dr. McArthur and myself in Chicago. At that time

* Dr. Davis' paper on "Treatment of Injuries to the Ureters" appeared in last issue; Dr. Leonard's paper on "Diagnosis of Calculus Disease of Kidney, Ureters and Bladder by Roentgen Method" appeared elsewhere.

the work was rather crude and the only stones found were those of large size. I am inclined to believe that some of the cases which had stone were not always demonstrated by the X-ray, but recently the technique has been very much improved. I regard it as of the greatest possible value in the diagnosis of stone in the kidney and recall a case where its value in this connection was well demonstrated. The patient was 30 years of age and had all the symptoms of a renal stone. The patient was sent to me by Dr. Billings, of Chicago. Dr. Crane, of Kalamazoo, who has been experimenting somewhat with the X-ray, took much interest in the case and examined it with his own apparatus. He presented three pictures which showed a stone three-fourths of an inch below the last rib and also a very small shadow one-third of an inch in length and not more than one-twelfth of an inch in width below this large stone. To the outer side was seen a kidney-shaped shadow about the size of a bean. At the time of the operation the kidney was pulled out and the vessels were controlled by pressure so that the posterior border of the kidney could be split. The large and small stones were easily found, but there was no evidence of the third stone. Very thorough examination was made, but was unsuccessful. I had the X-ray picture in the operating-room and I measured with my eye as nearly as I could where the third stone was supposed to be. I then took a hypodermic needle and very readily found the second size stone in the kidney itself, which shows the great value of the X-ray. You would be surprised at the small size of the smallest stone, and I am satisfied that this method is the most valuable for diagnostic purposes that we have at our disposal. Where it fails it is largely due to improper handling or wrong interpretation; when you hear a man say it is misleading, be sure that either he does not take good pictures or he does not know how to interpret them. We must learn something about the technique and how to interpret the result gained.

DR. J. WESLEY BOVEE, Washington, D. C.—Until recently we had very little evidence of the value of the X-ray in the diagnosis of biliary and renal calculi and I am very glad to learn that the work can be done so satisfactorily at the present time.

I was very much pleased with the way Dr. Davis presented the subject of ureteral injuries, and I have no doubt that the best method of uniting a severed ureter is by uretero-ureteral anastomosis. The end-to-end method is done in nearly all cases transversely, and, in one of my own, obliquely. The experiments with this method on dogs has not been carried out on man in but the one case. The lateral anastomosis by Dr. Weller Van Hook is a good method, and recently another method of lateral anastomosis similar to the way it is performed in the intestines has been brought forward in Italy. The operation by different methods has been done 21 times on man, and an unfavorable result followed in but one case. Anastomosis with the bladder is a good operation and has been done something like 70 times. The point on which I do not agree is concerning the failure of the rectal or colon implantation, which has been done over 80 times and in a large number of cases has been successful. If we remember the work done by some of the foreign surgeons and get their statistics we shall find that they are successfully implanting the ureters into the bowel. The implantation of the severed ends of the ureter, however, has not been very satisfactory here, if we may judge from experiments on dogs, but the dangers have been greatly overdrawn. There has not been a case reported of marked stenosis in uretero-ureteral anastomosis, except one where tuberculosis was present; this may have had something to do with it, and the operation was not necessarily faulty.

DR. GEORGE GOODHUE, Dayton, Ohio—It was my experience six years ago to have a patient who complained of pain over one side in the kidney region, but not on the other. A surgeon of large experience was called in to operate on this man, and removed the kidney from the side which gave him the trouble, although it was very slightly, if at all, diseased. The other kidney I removed at the autopsy several months later, and found it packed with stone. I simply mention this to show what the X-ray might have done had we had it at that time. Only an hour or two before I left home I had a patient, who gave every symptom of renal calculus, subjected to the X-ray, but I came away too soon to learn the results. I would like to ask Dr. Leonard to state what part of the surface should be exposed to get the best results, i. e., whether the posterior, anterior or lateral. Our work is being done by a man who is doing excellently in this line. Later I shall report a case of successful anastomosis of ureter by implanting the upper section into the lower through an opening made into the side, as recommended by Kelly.

DR. RANDOLPH WINSLOW, Baltimore—Four years ago, while doing a hysterectomy, I was unfortunate enough to cut a ureter. I was aware of the work that had been done by Van Hook and Kelly, and I made an incision into the ureter, slit it up, invaginated the upper end into the lower, closed the lower end over the upper, and the woman recovered. The operation, so far as I can see, does not differ from the one the reader of the paper has presented, except that I used silk instead of catgut. The woman has remained well for three years, and I believe is still so. All of these operations are merely modifications of the original method of Van Hook, and to him is due the credit for whatever success has been accomplished. The ureter is ordinarily described as terminating in the pelvis of the kidney, which, passing through the sinus of the kidney, forms a large dilatation within the substance of this organ. This description is not correct in most cases. The pelvis of the kidney is usually quite a small structure and may be either fusiform or triangular, or more or less quadrilateral in shape. From the pelvis issues several long and narrow tubes, usually at least four in number, which terminate in calices after passing a considerable distance, perhaps an inch or more in length. You may have a stone in one of these calices. You may pass a ureteral catheter, which will go into the pelvis or into one of the calices, but not in the one where the stone is impacted. A stone developed in the lower calices can not be reached in this manner.

DR. CARL BECK, New York City—It seems to me to be a deplorable fact that the great importance of the X-ray has not been realized by the profession, and I only wish that more such beautiful and convincing explanations could be brought forward. I agree with every point but one, and that is that the skiagraph will always show whether a renal calculus is present or not. I think this is a dangerous statement. Although a man's technique may be splendid, yet he may commit some errors. I would not make a diagnosis on a negative skiagraphic report regarding the presence of renal calculi. While a positive skiagraph is proof enough for the surgeon, a negative skiagraph will not convince me there is not a stone. In a doubtful case at least two short and long exposures should be made, and if possible, with different tubes. It has occurred to me that renal calculi, if they be elliptical in shape, may be confounded with biliary calculi, particularly if the body is irradiated in the oblique direction, so that the calculus appears near the spinal column.

DR. L. L. MCARTHUR, Chicago—I agree with the last speaker, Dr. Beck, that not all calculi may be expected to be found with the skiagraph. I believe Dr. Leonard, in his paper, failed to emphasize sufficiently the fact that the chemical composition of the calculus determines the intensity of the shadow. A uric-acid calculus will give a very slight shadow. I made some investigations before attempting to photograph a stone in the kidney, and on taking a group of calculi of varying types I found that a pure uric-acid calculus gave a very feeble shadow. Since that time I have cut down and found uric-acid calculi which were not demonstrable by the X-ray in the hands of our expert in its use, Mr. Fuchs.

DR. J. E. SUMMERS, JR., Omaha—Dr. Davis' technique is practically identical with that adopted years ago by Joseph Price, and is, I believe, as simple as any, being particularly advantageous when there has been a loss of substance and under such circumstances has an advantage over Van Hook's method. One must remember when operating on the ureter that it may have a fellow on the same side and that these ureters may come from a horse-shoe (more or less fused) kidney. Those who have examined the pathological exhibit will

remember a specimen of double ureter on both sides, there being two separate kidneys. Recently I did a left-sided nephrectomy for tuberculosis; the patient was a female, aged 2½ years. There were two ureters on this side and a large kidney. Fearing the possibility of a single kidney, I button-holed the other side in order to examine for the presence and condition of the right kidney. The kidney was removed together with the ureters, the lower one, which was healthy, was removed only in part, the upper, which was tubercular, was removed to below the pelvic brain. The child recovered nicely.

DR. F. B. CARPENTER, San Francisco—Seeing Dr. Kelly requested that all cases like his own should be reported, I will report one to add to the list. I brought the upper end of the ureter down to meet the lower, and consequently tied off the lower, destroying the mucosa that remained. I then made a large incision in the posterior wall of the bladder and passed three catgut sutures from within out to the upper end of the ureter. I brought the ureter firmly down from the lower angle of the incision into the bladder. When this was once secured I closed the remaining portion of the long incision into the bladder, and the patient made a good recovery, without any bad symptoms. I would call attention to an idea I derived at the time of the operation. It occurred to me that hereafter I could make use of Murphy's idea of a button in making anastomoses between the lower end of the ureter and the bladder. One important thing in this connection was that when the button came away it must necessarily fall into the bladder and could then be brought out through the urethra. The button will probably be slow, as our experience with buttons passing into the intestine has been. Phosphatic deposits may accumulate, which will cause some delay.

DR. C. L. LEONARD—I purposely refrain from speaking of the technique of skiagraphy, as I have just published a full description in the *Annals of Surgery*, and reported 59 cases in which I had found 12 calculi. Of those calculi a chemical analysis has been made, which shows that they consist of all the varieties except cholesterin. Uric-acid crystals, carbonates and phosphates are all represented. The reason why these calculi may now be detected by the X-ray, but could not at first, is due to the different quality of the X-ray I use. If you use a tube that has an equivalent resistance of 2 inches you will penetrate a uric-acid stone, but if, on the other hand, you use a tube which has a resistance of 1½ inches and will stay at that point, you will not penetrate the uric-acid stones. I found a calculus that weighed nine-tenths of a grain, while another of pure uric acid was removed from the ureter and weighed two and three-quarter grains. I had hoped to be able to show you some slides demonstrating these calculi. One of those slides shows 7 calculi that have been taken with different qualities of the X-ray, but with all other conditions equal. It shows that vacuum tubes will penetrate uric-acid stones, while the low vacuum gives opaque shadows, and it is this improvement in the technique that has made it possible for me to develop the method which I now use and which is so essential. I use a light which will not penetrate the less opaque calculi. If you get in the negative a shadow of the lumbar muscles you may be absolutely sure that no calculi exist. The only case of error in either positive or negative diagnosis was made in a case examined for Dr. W. W. Keen. It was an error in technique and served to show that the method *per se* was not at fault. The plate had not been placed sufficiently high, so that a calculus in the upper pole of the left kidney escaped detection. This error only served to strengthen my belief in the correctness of the method and helped to improve my technique. A second case for Dr. Keen showed that I was amply justified in my faith in the method, even to the extent of opposing his diagnosis. The symptoms were sufficiently severe to justify operative intervention, but the result of the operation coincided with the negative diagnosis. It is the method which I believe is absolute, the errors are entirely the result of faulty technique in applying it.

DR. B. B. DAVIS—I have certainly succeeded in getting some more cases reported, if my paper has accomplished nothing else, and this will make these cases of record. In practically all instances where there has been a ureter severed at the time of operation the patient is exhausted and the surgeon is tired before the operation is completed, and consequently we want to have a method of repair which will be as simple as possible. The quicker it can be done the better will it be for all concerned. Kelly will do his operation very quickly, of course, but for the average operator I think it will take a good deal longer time than the method I have described. Although I do not profess to be a rapid operator, I am sure it did not take me more than five minutes to finish up the anastomosis. Catgut soon dissolves, so that there is no danger from the suture. As to the button which has been shown, I can not but think that with such a small lumen as it must necessarily have, it is almost sure to be filled by the phosphates before it separates.

WALLED OFF.*

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"Walled off" is an expression so often heard in connection with cases of appendicitis which have gone on to pus formation, that I have selected it for the subject of dicsussion. When I hear a physician boast that his case has advanced to this stage and is ripe for operation, I often wonder how it is possible for him to have been unaware of the dangers to which the patient has been subjected and feel sorry for the physician's or surgeon's lack of knowledge of the living pathology of this vicious and deceptive disease that he has allowed to stealthily advance to that point where he believes he has every reason to congratulate himself. The most charitable view one can come to is, that he is familiar with operation under this one circumstance only.

In order to make clear the object of this paper, let me draw the comparison between an operation for walled-off pus, and operation in the absence of pus, or before the pus has become walled off.

Before taking up the arguments in favor of early operation and against late interference, let me impress on you that the mere evacuation of an appendicular abscess, drainage and subsequent healing of the abscess does not insure the patient immunity from a subsequent attack of appendicitis. A recurrent attack is much more likely to follow a partial operation—where the appendix is not removed—on account of the retention of an appendix which is damaged, therefore more vulnerable, and a fruitful source for subsequent attacks. That the appendix, in the case of a walled-off abscess, is frequently discharged as a slough, I am prepared to deny. The surgeon or the physician deceives himself, the patient, and the patient's friends when he makes this statement. I have repeatedly operated on cases in which a walled-off abscess had been drained, and in not one have I failed to find the appendix. At this time I may say that I have never met with a case where the appendix was normally absent.

Walling off of an abscess is nature's means of protecting the general peritoneal cavity. It has been stated that nature should be allowed to pursue its course unhampered by human skill or interference. The fact must not to be lost sight of, that nature in dealing with pathological conditions does not work with the same immutability that it does with other normal laws, and therefore there is always to be considered the probability that the lauded and longed-for walled-off condition may fail to materialize, thus leaving the patient far worse off in the second state than he was in the first. The fact that a sufficient number of cases which constitute a large series is warrant enough for a decided opinion enables me to

* Read before the Profession of Springfield, Mass., at the Mercy Hospital.

say without reservation or fear of successful contradiction few cases of abscess are completely walled off.

What is to be gained by waiting until the abscess is walled off? Shall we allow the unfortunate patient to perish, or have one or more of the many serious complications that go hand in hand with abscess in the peritoneum?

To recover from an operation for a walled-off appendicular abscess, means, to say nothing of the many risks to life, an indefinite convalescence. Abscess formation in appendicitis is a preventable complication and certainly a desirable one to eliminate from the treatment of the disease. I fully realize the difficulty experienced by physicians in some instances to convince the patient and their friends that early operation is the course of wisdom. This is the exception and not the rule, as the laity more often raise the question of operation when they are told that the case is one of appendicitis.

What can we expect when many of our prominent surgeons are still crying down too-early operation. Against the latter dictum, just criticism is in order. It is my experience and yours as well, I am sure, that the surgeon and physician who has had the largest experience with this disease and particularly those who have studied the living pathology, that is having seen in the living belly-cavity this vicious inflammation when in full force, are those who advocate, yes, pray for early interference.

When I hear the surgeon or physician say, "let us wait twenty-four hours longer," I am sure their experience has been limited and therefore they are not qualified to give an authoritative opinion on this important question. Many lives have been sacrificed by procrastination, while I dare say not one, except through faulty technique, perhaps, has been lost by too-early interference. Great is the number of surgeons and physicians who have regretted operating too late in appendicitis, while I venture to declare that if this country were raked with a fine-toothed comb not one could be found who regrets having operated too early. This is the doctrine to inculcate into the minds of our medical friends if we would reduce the mortality of this disease and do away with complications and sequelæ.

It has been said that not to be able to discriminate between cases of appendicitis which require immediate operation and those in which operation can be deferred for one or two days, or until the attack has subsided, is unscientific. In answer to this I beg to say that this kind of science which is killing many human beings daily should be thrown to the dogs. I challenge any one to interpret to a certainty the pathological condition in a case of an acute inflammation of the appendix, unless the opportunity is given to see inside the belly-cavity. To be plain, this sort of pretention is disgusting to say the least. I tell the students attending the clinic at the German Hospital that I know but two things in a case of appendicitis, namely, that the disease is an inflammation of the appendix and that the appendix should come out.

To foretell the extent of the diseased condition on the inside of the abdomen by an external examination I am unable to do. Perhaps my colleagues who have seen only little of this class of operations can, and if so, they are wiser than I am.

Statements such as the following, that "I have had two hundred cases of appendicitis and never lost a patient, nor have I had to have one operated on," is false beyond question. Many of the gentlemen who have never lost a patient have waited until the eleventh hour and then sent for the surgeon, who very foolishly operates, is credited with the death, and relieves the attending physician of counting this against his record.

There are five forms in which appendicular abscess are met with, depending on the locality in which the collection is situated. I will discuss them one at a time and try to convince you of the futility of depending on nature to control intraperitoneal suppuration and its effects, by the process of walling off.

1. The most common in my experience is when the collection is post-cecal, or post-colic, and between the layers of the mesocolon, it is a walled-off collection, but not walled off so as to avoid infection of the peritoneum in its evacuation. The parietal peritoneum does not enter as a part of the abscess wall, and therefore in opening the abdomen to get at the collection the general peritoneal cavity must necessarily be opened and unless gauze be properly distributed so as to make up for nature's deficiency the general peritoneal cavity will be endangered. It may sometimes be possible to open the collection through the loin space, but this means an element of uncertainty as well as simply evacuation, leaving the appendix. I think it is inadvisable, and to a degree dangerous. If any class of surgery should be complete it is appendicular surgery.

2. The second variety of walled-off pus is where the collection is found directly beneath the parietal peritoneum and its limiting wall is formed by the cecum, coils of small intestines, the omentum, the appendix, the parietal peritoneum and masses of lymph binding these together. This is the variety of walled abscess which the advocates of the "let alone" theory hope to secure by their masterly inactivity. This variety occurs second in order of frequency of the walled-off type of appendicitis. In this class of cases it is a most common occurrence to find that the abscess is in communication with, and includes, the pelvis. To complete the operation in this type we must protect the peritoneal cavity from infection with protecting gauze, evacuate the collection, remove the appendix, introduce drainage, both tubular and gauze.

3. In the third variety of walled-off abscess, the collection is wholly confined to the pelvis and shut off from the general peritoneal cavity. The pus can not be evacuated without endangering the peritoneal cavity unless gauze packing is extensively used to protect it. The appendix will always be found to be located in the pelvis and therefore its removal must be accomplished before completing the operation.

The evacuation of a pelvic collection of pus, the result of an appendicular inflammation, by vaginal or rectal puncture is to be heartily condemned for several reasons; that it is contrary to sound surgical principles; that it is attended by certain risks; that it does not remove the source of disease; and, that it is at least only a very dangerous and temporary makeshift. By attacking the pelvic collection of pus through the abdominal wall, the appendix can be removed and the pus cavity properly treated, thus favoring healing by the process of granulation.

4. The fourth variety of walled-off pus is found located near the median line of the abdomen and to the inner side of the cecum. The retaining wall is composed of cecum, appendix, small intestine, mesentery, omentum, and possibly the sigmoid flexure of the colon. In order to operate with more safety to the patient in this variety of abscess it may be necessary to make a second incision to the median side of the incision which opens the pus cavity, so as to protect the peritoneum with

gauze packing in order to complete the operation by removing the appendix.

5. The fifth variety of appendicular pus is found free in the peritoneal cavity. In this variety there has been no attempt on the part of nature to confine the pus. This, the most unfortunate variety, especially if the patient is not operated on within the first twelve hours, in that the patient's chances are reduced almost to nil. The attempt to treat this variety of abscess sucessfully will depend on the thoroughness of the technicpue, which will sometimes secure a favorable outcome to the case.

The writer's successful cases in this variety of abscess have been where he has operated within the first six or twelve hours of the disease. The following case demonstrates the correctness of my position in appendicular surgery. I am very sure that had the operation been deferred in the case I report until the serofibrinous exudate had become pus, or until the appendix had perforated, this young physician's life would have been lost.

Patient was an interne of the German Hospital, operated on for acute appendicitis Oct. 1, 1900. History of previous attack was negative, with the exception of possibly an attack of the mildest character two years ago. On the evening of Sept. 30, 1900, after an especially hearty dinner, the patient had a little abdominal pain, which was general and cramp-like, but not severe. He took a dose of salts. The general pain complained of at first became better after salts had operated, but patient was left with some pain, which was referred to the right iliac fossa. The following morning, Oct. 1, the Doctor was on duty attending to his daily duties. About 12 a.m., Oct. 1, pain became so much worse that the Doctor went to bed. I saw him at 1 p.m., Oct. 1, when the diagnosis of acute appendicitis had been made by my house surgeons, Drs. Curry and Moore. I confirmed the diagnosis and operated immediately, finding the abdominal cavity filled with serofibrinous exudate, and appendix distended with pus. Recovery was uninterrupted; in fact, it was unusually smooth. Operation was made through a 1½-inch incision through the right rectus muscle.

Thus far we have dealt with cases which have advanced to pus formation. I shall now take up pus in the peritoneal cavity, whether free or confined, and endeavor to prove to you that it is far better to anticipate pus than to have to combat it.

Let us sum up the evidence of the possible results of appendicular pus, and in order to deal with it properly, divide it into two headings, general sepsis and local sepsis. Under the first, general sepsis, we must include septicemia, pyemia, pyelophlebitis, hepatitis, abscess of the liver, septic pneumonia, septic nephritis, etc. Under the latter heading we find adhesions, softened and gangrenous bowel and omentum, perforation of the bowel, bladder or ureter, fecal fistula, prolonged convalescence, ventral hernia, and subsequent obstruction of the bowel, either from bands or from the contraction of the abscess wall.

In drawing comparisons between the mortality in the presence of pus and operation done prior to pus formation, we know that operation in the presence of pus gives a percentage of 10 to 18 deaths per 100, while in the presuppurative stage the mortality is .5 per cent. This statement should make further argument unnecessary.

It is likewise proper that we consider the length of time necessary to establish convalescence under the two conditions. The recovery in cases operated on in the presence of pus is always problematical and the convalescence protracted, lasting anywhere from four to six weeks in the most favorable cases and in many instances to as many months, while recovery in those cases where pus is absent takes but ten to twelve days.

In considering some of the results of pus formation from appendicitis, fecal fistula is one of the most unfortunate. The most common cause for fecal fistula is pressure necrosis, due either to an extensive purulent collection, or from the very high grade of infection. By very early operation a fistula bue to either of these causes can be prevented. One of the common causes for a simple fistula is an unhealed abscess cavity. It is unnecessary for me to add that a fecal fistula too often is a most distressing sequel to appendicitis and difficult at times to cure, even with operative interference.

It has been my experience that walled-off abscess is followed by ventral hernia, the operation for the relief of which is attended by greater risk than is the original operation, and too often with less certainty of a permanently good result. Chronic sepsis is the natural result of a peritoneal abscess; this of itself is attended by a mortality.

There is no choice as to the time of operation in appendicitis; theoretically, there may be arguments advanced to refute this statement, but it is the results which impress us and from which we must draw the rules of guidance in matters which involve life and death. It has been claimed that appendicular pus becomes less virulent the longer it remains in the peritoneal cavity, and that in time it will become sterile but what of the poor unfortunate patient while this intraperitoneal sterilization of the pus is taking place?

It has been said that man can become accustomed to anything, even hanging, and it seems, if we accept the above claim, that he can even become used to having a collection of pus in his peritoneum until it becomes sterile, but that delay on the part of the patient, or by the consent of the physician, is good and sound treatment, I deny with all the strength I possess.

Let me insist that you have your cases of appendicitis operated on, yes, immediately after the onset of the initial pain. Do not be influenced by the pernicious doctrine that you can wait for further developments, as the latter teaching is at the cost of many precious human lives.

When I hear and read remarks like this, when in cases of appendicitis the symptoms are progressing unfavorably after twenty-four hours have elapsed, operate and operate immediately. I have unquestionable evidence of one of the reasons at least why the mortality in this disease is so high. Why should delay for twenty-four hours in the presence of unfavorable symptoms be entertained? My answer would be want of confidence on the part of one so advising.

It has been said, and well said, that he who stops to deliberate is lost; this is apropos of this discussion, for the physician or surgeon who stops to deliberate, that is, waits twenty-four hours, to operate in the presence of unfavorable symptoms, is not only lost in the sense that he is lost as to the knowledge of the living pathology of the disease, but that many more patients will be lost if this dangerous teaching is practiced.

In concluding my remarks on this subject I shall in brief review the salient points with especial reference to impressing them on your thoughts and ask your unbiased discussion in reviewing the facts:

1. Pus is an avoidable complication in the treatment of appendicitis.

2. The patient's welfare is best preserved by avoiding any of the complications incident to pus formation.

3. The walled-off abscess is not the blessing to be sought, but rather an evil to be avoided by prompt surgical interference as soon as the symptoms of appendicitis manifest themselves.

4. Operation on cases of walled-off pus imperils the patient's chances for recovery, on account of liability to infection of the peritoneal cavity.

5. Fecal fistula as a result of a walled-off appendicular abscess is an unavoidable sequel to appendicitis and should not be permitted to occur.

6. The latter statement is true of all complications and sequelæ of appendicitis due to pus formation.

THE ARMY SURGEON IN THE PHILIPPINES.

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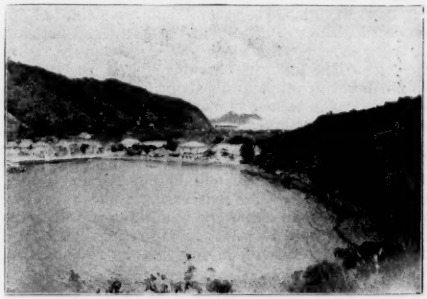
In a number of islands, stretched out through a thousand miles of the greatest of oceans, is the United States Army of occupation in the Philippines, holding positions in the interior of islands as large as the State of Ohio, many of whose inhabitants had never before seen the faces of white men. With the troops combating diseases of new type, among barbarous communities ignorant of all sanitary precautions, is the army surgeon, attempting to carry with him the principles and appliances of modern science necessary to the preservation of life, in a climate that is strange to him and which impels a study of its peculiarities at the same time that it increases his work. The medicines, instruments and foods necessary for the victims of wounds and disease in these remote places must be carried, with difficulties of which even the quartermaster's department is scarcely competent to judge. Troops are sometimes expected to live on the country; campaigns have been made that way. But no medical officer can deliberately leave to the "fortunes of war" the chance of finding medicines and instruments in the enemy's country. We can eat the barbarian's or even the savage's food, but he has no medicines.

Yet, as a rule, our troops have been provided with abundance of medicines, instruments, sterilizing apparatus, dressings, foods for the invalids, shelter and nursing. But it has not been done without constant planning, forethought, ability to adapt, strenuous endeavor, sacrifice and loyalty to duty. With moving bodies of troops or expeditionary forces, as they have been called in this campaign, the handling of the sick is naturally a more difficult problem than in even the smallest and most remote posts. Schwan's Expeditionary Force in its movements offers a typical illustration of the medical corps in action, and some remarks concerning it will best illustrate its work.

This force consisted of about 27,000 men, and moved south from Manila, Bacoor and Ismus, through Cavité province to the province of Tayabas around Lake Taal, occupying important points as it proceeded and part of it appearing on the Laguna da Bahia. Medical supplies were sent to points on Manila Bay, through which or from which the forces started, and were then transported under the supervision of medical officers in ambulances and wagons. As the region traversed became more rough and mountainous, both supplies and the sick and wounded were conveyed by Chinese coolies. These bearers were invaluable in the country impassable for the ambulance. They were economical and reliable, being useful immediately on the firing line. As the expedition debouched on the southern seacoast it was met by a hospital ship, which relieved the army of its sick and furnished fresh supplies. Thus a fresh start was practically possible. When the expedition, recurving, reached the shore of Laguna da Bahia it was met by another hospital ship, a light-draft boat, that repeated the work of the first ship.

Thus the care for the sick was most ably performed, and the column, relieved of the burden of its wounded, was rendered more mobile, a military advantage of first importance. This was also done by leaving the sick and wounded with the troops garrisoning the points held as the army proceeded. But it did not end with leaving them. Post hospitals arose as rapidly as the smoke from the camp fire; equipments and medicines were at hand by the forethought of dividing the supplies into small outfits, and relief and rest were at once afforded to those needing it. The seriously ill were rapidly sent from emergency to regimental hospitals, or to hospitals placed at points advantageous for the transportation of men and supplies.

The base hospitals, which were only converted buildings, usually of a public or semi-public character, answered well and were more fully equipped than the smaller hospitals. They have on an average a capacity of about fifty beds, and are at such points along the



Bird's-Eye View, Convalescent Hospital, Corregidor Island, P. I.

arteries of transportation, sail or water, that fresh supplies can be readily and frequently furnished. Here the treating of patients is necessarily an easier problem and those requiring special foods obtain them. These base hospitals are in close touch with Manila, the metropolis of the islands and the headquarters for Luzon, the largest island.

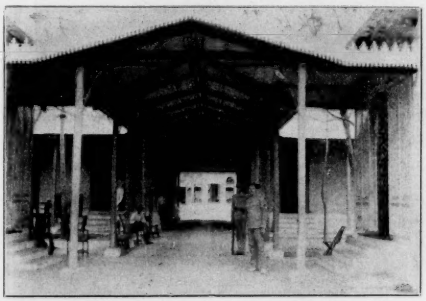
At Manila are large general hospitals; one alone contained, at one time, 1400 patients. Here are sent patients requiring special treatment, and those from the crowded base hospitals. A receiving hospital assigns them to others of special function. Surgical cases are taken to one on an island at the entrance of Manila Bay; those convalescing from malarial fever, to another; medical cases and all diseases of the eye, to another; disabled soldiers who are to leave the service and whose disabilities are to be passed on by a medical board, and all soldiers who are to be sent to America for treatment, to another. From the latter the patients are transferred to the general hospital at San Francisco, from which point they are sent to such places as their special troubles demand or discharged from the service.

Contagious diseases are closely looked for, and few, if any, escape the hospital authorities. When a diagnosis is not clear a board investigates. All this work

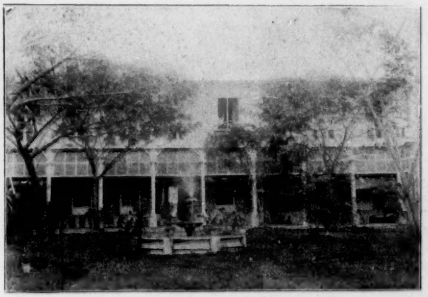
comes in the regular line of duty of the military surgeon.

The regular corps is at present supplemented by several hundred civil surgeons. Understanding the methods of the corps, the administrative work is naturally entirely in the hands of the surgeons of the regular army. Further assistance is rendered by the medical officers of the volunteer regiments, most of whom are permanently attached as regimental officers. As the regiments are broken up into small detachments for garrisoning, the need of a larger number of medical officers is pressingly increased. The distance between the posts is often considerable and traveling between them has, as a rule, been dangerous. In a land where physical exertion is impossible to the same extent as in the temperate zone, it requires a separate medical officer with each independent detachment that is at all removed from headquarters.

The proper work of the department is at present seriously handicapped, both by the small number of men, and further by the fact that the surgeons who are not members of the regular corps are inexperienced in the method of the department, though of sufficient professional attainments. The distribution of medical supplies is the reverse of that of forwarding the sick



First Reserve Hospital, Manila, P. I.—Front Entrance.



Main Entrance, Second Reserve Hospital, Manila.

soldiers to the United States. With the United States as the source of supplies, through San Francisco they are shipped down to Manila as the central distributing point of the archipelago. Points accessible by water in Luzon and by the only railway are then supplied; and then the smaller posts in the respective districts of these depots, and so to the emergency hospitals.

The class and quantities of medicines are much different from those issued for the home troops. The diseases characteristic of the tropics require quantities of drugs scarcely used in the United States. The supplying of appropriate medicines and in sufficient quantity and in advance of the seasons when the demand for them will be the greatest, is a work calling for forethought, when we recall that many posts are cut off from all communication during the greater part of the rainy season. In Luzon, an island of some 40,000 square miles, Vigan and Aparri in the north are supplied from Manila by water communication; Angeles, in Luzon, by the railway; Nueva Caceres, in S. Luzon, by water. In the Viscayan Island Silay, Cebu and Zamboanga are the centers for their respective districts. The transportation of the sick and the supplies is supervised by the medical department, though it increases their work immensely. The character, number and quantity of supplies handled by the department is beyond belief. Medicines, foods necessary for the sick, instruments, mechanical and scientific apparatus and food, even ice, are supplied. It is hoped to equip all base hospitals with ice machines capable of an output of 3000 pounds per diem.

The medical officer is responsible for the care, discipline and existence of the soldiers who assist him in his professional duties, the hospital-corps men. Feeling the need of better trained men than the present system gives it, the department established a school for educating to a limited extent the subordinates on whom it must depend in both practical and theoretical branches. Men are assigned to a company of instruction for a period of eighteen weeks. Some fifty men are then gathered from the different districts of the department and drilled and taught theoretical and practical branches of hospital nursing, practical handling of the wounded on the field, ward work, cooking and administration of medicines. A smarter and more competent man is turned out and some bad material is gotten rid of. To those obtaining a certain degree of skill a certificate of proficiency is given at the recommendation of the officer who is acting as instructor. At present, while the company is an independent organization, it is located near Hospital No. 3, one of the largest hospitals in the islands, and the men taking this course are thus enabled to have practical instruction under close observation. Records are kept of the man's qualifications and conduct and at the end of his course he can be assigned where most needed, according to the cases for men of special aptitude or general proficiency. At the last graduation of this school these men were promoted to the rank of acting hospital steward.

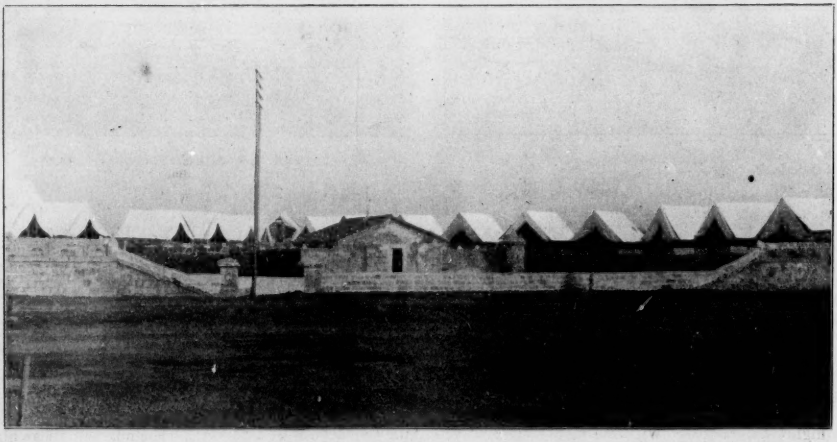
This brings us to the question of nurses. The experience of the United States Medical Department is that men of greater proficiency are needed in the hospital corps, and that with the training and wages paid to female nurses they will probably be forthcoming and have the advantage of being useful with moving columns in the field as well as in the general hospitals. Indeed, in them is probably to be found the solution of the interesting question.

Still further to better combat the diseases peculiar to the climate, medical officers have been studying tropical diseases, and recently several have been named to scientifically specialize on this subject. Their studies and the results will be followed most closely and possibly a special course may be offered to the junior medical officer when he comes to this island.

The question of transportation has already been touched on but much of the actual handling of the sick is done by the medical department alone and absolutely independent of the quartermaster's department. Two ships are under the orders and immediate control of the department, which are devoted wholly to the transportation of sick, or as actual hospitals. One has a capacity of 260 beds. It is easily seen what an important factor a hospital can be in relieving pain and sickness, and also even the mobility of a column, by immediately removing its disabled and making unnecessary the detaching of troops to protect its sick and wounded. The hospital is moved to the wounded, instead of the wounded to the hospital. In an archipelago with numerous scattered ports and with independent expeditionary forces this is a matter of first importance. The conditions could be still further improved by the addition of several small light-draft vessels. The present ships, while almost perfect in equipment and of good size, are often unable to get near enough shore to enable the sick to be easily taken off.

The only railway in the islands, tapping a large area and running through the seat of the most active operations and through almost the only country not open to water communication, becomes early an important artery of transportation of men and supplies to where most of our troops were operating. A surgeon was kept on duty on the daily train and ambulances run in connection with the distributing hospitals to Manila. To facilitate the handling of the very sick, and make the trying trip more endurable, two cars were fitted up. Cots were placed in them, a closet added; a small ice-chest, medicines and cooking apparatus were carried. The trip from Manila to the end of the line is twenty-four hours in time, and the convenience and comfort to all concerned can scarcely be overestimated. Hos-

Saturday Inspection, Hospital Corps, Detachments of Hospital No. 3, Manila, P. I.



Quarters of Company of Instruction at Manila, P. I.

pital corps soldiers were on duty and a surgeon at hand, so all emergencies were ably met.

Among the most important and difficult of the problems met in the administrative work of the medical department are those of public vaccination. The American soldier has been vaccinated when recruited and usually also previous to this. On the long trip to the Philippines he is vaccinated again, if necessary, and frequently as a matter of precaution. When finally permanently garrisoned he is contantly under the eye of a medical officer who sees that all the men are protected against smallpox. The result is that even in a country where it is epidemic, the disease has been of little trouble or danger to the American. But to the native it is far different. The many pox-marked faces are among the first thing peculiar to the country that impress the traveler. Its ravages have been dreadful but, in spite of its being among the most frightful of diseases, the Filipino pays little attention to it. Ignorant of all prophylactic measures, except inoculation, the funerals are public, the cases are visited by friends, and the family remains living in the same hut. The fact that it has been epidemic and endemic since Europeans first visited the islands has probably rendered it less severe to the descendants of the survivors; many are protected by the disease

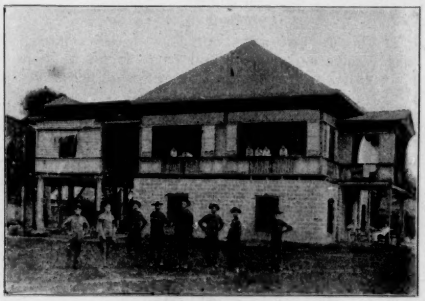
Hospital Steam Launch.

itself. The three districts of Northern Luzon may be taken as fairly indicative of the conditions prevailing elsewhere in the archipelago, except as to the number vaccinated. This is understood when we remember that only in the districts where peace prevails is it possible to vaccinate. Even here prejudice and ignorance have hindered the work, but this is true even of England and the United States.

To supply the vaccin necessary for this great work the chief surgeon has established farms in Manila, and one in the southern islands. The lymph is procured from the cariboo, the indigenous water buffalo. The results, where the vaccin matter can be obtained fresh, are highly satisfactory. With the manufacture of vaccin at base hospitals, the lymph will be preserved and can be sent to all districts occupied by our troops, and the natives, as well as our troops, be protected.

It was natural to expect, under military government, that the city of Manila, the headquarters of the army, would be taken care of by the military régime, but more than that was done. Not only was the city cleaned, sewers repaired, filth removed and improvements generally instituted, but the city health was directly looked after by the medical department. A board of health was established. American quarantine officers had already taken up more thoroughly and efficiently the work formerly neglected by the Spanish régime. Practically a house-to-house inspection was made. The streets and public places had already been cleaned or work begun on them by the sanitary department. But now old vaults, dirty yards, and unhealthy places generally were ordered cleaned and the order strictly enforced. A smallpox hospital was established and cases were removed there and treated in isolation while the places formerly occupied were disinfected and quarantined and the other occupants vaccinated.

The success of the medical department in combating the scourge of the East, the black or bubonic plague, reflects most brilliantly its ability and its courage. This dread disease has been prevalent in Manila for many months, but we have yet to hear of the first case outside the city limits. The comparatively small number developing speaks well for the means adopted by the department, all of which were the most modern that science offers. The use of the odorless excavator owes its introduction in Manila to the medical department. The inspection of the abattoir, of the markets and the foods for sale in them are the civic duties in which the medical department is engaged. But this work does not stop in Manila. It is only more extensively carried on



Exterior from South End and Office, Regimental Hospital, Seventeenth U. S. I., Bautista, P. I.

there. The same system prevails throughout the provinces occupied by our troops. Every city, village or hamlet occupied by troops is kept in the same clean condition. None are too small. The streets must be clean and the natives must not litter up the yard. The house and person of the native is, to his credit, usually extremely clean, but he is indifferent as to what his surroundings are or whence comes his water-supply. These important things are being rapidly taught them. Typhoid is endemic in the islands and garrisons have to be most careful in the selection of a water-supply.

Leprosy, the care of those afflicted with it, and the prevention of its further inroads, are subjects now occupying the medical department. A commission is searching for an island on which to establish a leper colony. Probably introduced from China, it has spread until there are in Northern Luzon some 12,000 (estimated) natives and Chinese afflicted with this disease. So far, it has been unrestricted, though for the relief of some of the sufferers a Chinese hospital exists. The supplies of medicines and other necessities may now be furnished. The medical officer in the isolated southern part of the island must receive the same care and attention to his applications for nurses or supplies as the one in Manila. The man in the interior of some mountainous province

must have his supplies before the rains have made transportation impossible.

The position of chief administrative officer of this department calls for abilities equal to those necessary to the successful manager of a railroad system or a great industry. But it is not a question of profits that is the splendid reward, nor is it an independent personal fortune. The tremendous responsibilities are assumed for a modest salary.

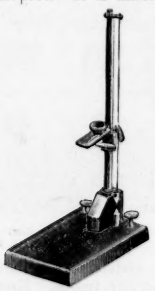
This hurried recital of the work of the United States Medical Department in the Philippines will probably introduce to the practitioner at home duties he had never dreamed of as belonging to this corps.

It would require a paper in itself to tell of the work the medical officer is doing among the natives of the islands in numerous little villages. The treatment of the sick, the government's generous distribution of medicines and food can not fail to elicit some feeling of gratitude, and moreover the sanitary measures will not fail to protect him and his family. The medical department will not be the least useful instrument employed in making Luzon a second Java.

A NORMAL ACOUMETER.*

E. AMBERG, M.D.
DETROIT, MICH.

If the eyes of a patient have been examined he may receive a certificate and go to any country with his ophthalmic passport. It is different with the ear.



Amberg's Acoumeter—One-fifth Natural Size.

The voices of different men vary, and instruments, which are precisely alike and can be used in precisely the same way by various examiners, do not exist. Even Politzer's acoumeter is not exempted, in my opinion.

After careful consideration of the merits of Politzer's instrument, I am convinced that the limit of exactness is not reached therein. In the first place it is too complicated to give a guarantee that all acoumeters can be constructed exactly alike, and there is a possibility that the same instrument produces different effects at different times, if differently handled by the examiners. For instance, the effects of elasticity are not entirely barred. Although the question may arise whether for our work those delicate discriminations should be considered, I am of the opinion that from a scientific point of view, if not from a practical one, we should have our instruments as exact as they can possibly be made.

Guided by a desire to have, at least for air conduction, an apparatus which excludes the possibilities of error as much as possible, I had one constructed, in Berlin, by Heele, maker of precision-instruments, which in my mind excludes errors to a greater extent than Politzer's acoumeter does. The principle of this apparatus is an old one. A steel ball of a certain weight, in this case of one gram, falls through a certain distance on a metallic block. The weight can be made absolutely correct. The surface, as to constitution and direction, can also be made absolutely correct; as the manufacturer told me metal of the same character can be procured at any time.

A similar instrument is used, for instance in psychophysical laboratories, in order to test the depth of sleep. I mentioned this fact some time ago when referring to my instrument on another occasion.

The conditions for examination can be changed, either by placing the apparatus at various distances from the patient's ear, or by changing the height from which the steel ball has to fall. I should like to suggest that, in comparing records, either the plan be adopted to place the instrument one or two meters from the patient's ear and to record the height, or else that the instrument may be moved and the distance recorded when the steel ball falls a certain number of millimeters.

I believe that Jacques Loeb has had experiments made on the ear with the aid of a similar instrument. I became acquainted with this fact after my apparatus had been constructed. The value of my apparatus consists in the fact that the instruments can be made so that they do not differ one from another.

32 Miami Avenue.

* Demonstrated before the Detroit Medical Society, Nov. 7, 1900.

AMBLYOPIA FOLLOWING THE INTOXICATING USE OF JAMAICA GINGER.

SUBSEQUENT RECOVERY OF VISION.*

EDWARD STIEREN, M.D.
PITTSBURG, PA.

A careful search through American ophthalmic literature reveals eight recorded cases of blindness following the ingestion of ginger. One case is reported by Archibald G. Thompson,[1] of Philadelphia. Asst.-Surgeon J. B. Greene reports[2] a case which appears to be one of the six carefully reported cases of Hiram Woods,[3] of Baltimore.

The history of my case is as follows:

N. C. R., aged 36, contractor and builder, was first seen Sunday evening, Oct. 15, 1899, and appeared totally blind, requiring the services of a friend to lead him about.

He had been drinking heavily on Saturday and, on sobering up Sunday morning in a "dry" community where no liquor of any kind could be obtained, purchased from a storekeeper a box of a dozen bottles of Jamaica ginger, each containing about an ounce. The entire dozen were consumed before noon, the first four bottles diluted with water, the remaining eight undiluted. About noon he dropped into a drunken stupor, and awoke about 3 p. m. totally blind, but with no other untoward symptoms, except a consuming thirst. His alarmed cries brought friends to his assistance; they brought him to me about 6 p. m.

Examination revealed the following conditions: Pupils widely dilated, and unaffected by light or accommodation; conjunctiva slightly injected; media clear;

* Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

1. Ophthalmic Record, November, 1897.
2. Annual Report of the Supervising Surgeon-General of the U. S. Marine-Hospital Service, 1898.
3. Ophthalmic Record, February, 1899.

no change whatever in disc or vessels, and beyond a slight blurring of edge of disc due to slight retinal edema, fundus of each eye was normal. Vision was almost nil; he could see hand moved at twelve inches. Cornea was almost totally insensitive to touch with camel-hair pencil.

Treatment consisted in immediate confinement to bed in a darkened room. Three hot foot-baths were given during the night, and 20 grs. each of calomel and compound jalap powder in divided doses. He received 1/8 gr. pilocarpin muriate hypodermically twice during the night.

This treatment caused active diaphoresis and catharsis, and at 9 o'clock the next morning patient was able to count fingers with each eye at ten inches.

The pilocarpin was continued, 1/8 gr. hypodermically at intervals of six hours, and calomel in 1 gr. doses every two hours for the next two days, when the pilocarpin was discontinued and 20 gr. doses of potassium iodid supplanted the calomel, slight tenderness of the gums occurring.

Patient's vision continued to improve, and on the fifth day he was allowed to come to my office; vision in each eye was 20/30. At no time was there any change in the ophthalmoscopic picture. His field of vision could not be obtained when first seen, but in the second office-visit, the fifth day after his indiscretion, no scotoma nor narrowing of the field could be demonstrated. Pupils reacted strongly to light and accommodation. He could read J. No. 1 with an effort, and read No. 4 readily. He has 1 D. hypermetropia with which, corrected, vision in each eye = 20/20.

I have seen this patient from time to time since his acute attack of blindness and, having been thoroughly frightened, he has totally abstained from alcoholic stimulants. His ocular condition remains the same as above noted. I saw him last, March 27, and obtained from him a negative history in regard to syphilis. He uses tobacco in moderation, and before his sudden attack of blindness, was a periodic alcoholic, going on a spree about once every six weeks and which usually lasted three to four days.

I believe, with Thompson and Woods, that the lesion in these cases is an acute retrobulbar neuritis, and that it is of a toxic nature.

The sudden onset in an individual who had practiced alcoholic indiscretions periodically for a number of years without any evil effects to his eyes, and who then becomes suddenly blind after drinking an enormous quantity of an irritating essence containing volatile oils, resins, and a questionable form of alcohol, inclines me to believe in the toxic factor in producing the neuritis. This belief is further strengthened when prompt eliminative measures are followed by improvement and cure.

THE DOUCHE IN THE TREATMENT OF OPHTHALMIA NEONATORUM.*

E. E. HOLT, M.D.

PORTLAND, ME.

On May 22, 1899, Dr. Fuller, of Bath, sent me an infant suffering from ophthalmia neonatorum. Dr. Fuller had been called in consultation to see the baby in Richmond and found it in such a critical condition that he advised having it taken to me at once. The baby was between two and three weeks old, and the disease had developed into a critical condition. There was a profuse purulent discharge issuing from both eyes, and so much chemosis and swelling of the lids that it was difficult to make a satisfactory inspection of the cornea of either eye; it was finally determined that the cornea was involved and about to break down in each eye.

The mother was making a supreme effort to save the sight of the child, having recently left her bed to make the journey to Portland. She was delicate, exceedingly nervous, but intelligent and anxious to do anything to save some sight for the child. As she was nursing the child I assured her that it was absolutely essential for her to compose herself in order to give her baby the best chance for recovery. This she did in a heroic manner; cow's milk was given in addition to that of the mother's. On carefully considering the case it did not seem to me that continuing the ordinary methods of treating eyes in such cases would preserve much sight for the child; but it occurred to me that if the eyes could be thoroughly douched and all the secretions from the conjunctiva kept constantly washed away there would be some chance of saving sight. Acting on this suggestion I took a Davidson syringe, and with the No. 1 point I pressed it between the lids at the outer canthus and threw a stream of tepid water containing about 1 per cent. of boric acid until I had used a quart or more for each eye. The point of the syringe was always directed away from the eyeball and was gradually worked along the whole length of the retrotarsal fold so that the conjunctival sac was thoroughly washed out. The douching of the eye was repeated every half hour, night and day, for the first twenty-four hours; then less frequently and at the end of the fifth day the baby was opening its eyes and looking about the room. This was certainly a revelation to me and the nurses who were familiar with the usual methods of treatment, and had witnessed the rapid change.

The cornea cleared, recovery was complete and the mother went home with all the happiness that could come from such a rapid and unexpected result.

The same method of douching has been carried out on other cases in about the same critical condition with the same happy result.

In the first case cited a 2 per cent. solution of nitrate of silver was used from the first and the eyes were cleansed by irrigations, pipettes and absorbent cotton. When the child came under my care the 2 per cent. solution of nitrate of silver was continued daily, care being taken that it did not reach the cornea; cold packs were applied to the lids between the intervals of douching, and the nourishment of the child was given all the attention possible.

All authorities are agreed that cleanliness is of the highest importance, but I fail to find any mention of the douche to accomplish this result. The douching may be carried out by the use of the fountain syringe, but I prefer the syringe like that known as the Davidson where the force of the stream can be increased or diminished at will. For the purpose of accomplishing the douching, especially at the beginning of the practice, I have had the Davidson Rubber Company make me a hook-like point which has several openings at its end that may be attached to the syringe and used instead of the No. 1 point that comes with the syringe.

I believe that the douche properly carried out will be as efficient to check the disastrous course of those cases of purulent conjunctivitis which have arrived at the critical condition here described as Credé's method is in preventing them from reaching this critical condition.

*Presented to the Section on Ophthalmology, at the Fifty-first Annual Meeting of the American Medical Association, held at Atlantic City, N. J., June 5-8, 1900.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

61 Market Street : : Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

SATURDAY, JANUARY 5, 1901.

THE PAST AND THE FUTURE.

With this issue we begin a new year and a new century. That just closed has been without parallel in the world's history in its material and scientific advances, and our science and our profession have not been the least sharers in the progress. The surgery of the beginning of the 19th century, as a distinguished authority has said, was nearer to that of the times of Hippocrates than to that of the present day, and the same is little less true of medicine in general and its related sciences, though the fact may not be so immediately apparent. In no corresponding period of the world's history as we know it, have there been so many epoch-making discoveries and so marked a general advance.

The medicine of 1800 was hardly less antiquated than its surgery, when compared with that of the present day, and this difference is not a matter of fashion or convention, but a scientific advance that stands the tests of time and experience. The marked prolongation of human life at the present time, over that of the 18th century or the beginning of the 19th, is of itself ample proof of the advance of medical science to which the science of hygiene owes its growth.

There is still another side to the shield, however; with all the progress of the past and present, there are still the old problems of death and disease to be met by our profession and some that are brought before us by the special conditions of our modern civilization. The world has, in a sense of the term, grown smaller and to the diseases of civilization through the increased and universal facilities of intercourse, we have to meet those of barbarism also. At the present time we are in the presence of a pandemic of plague, which has already invaded regions where it possibly was never known before, and we do not yet know what the outcome may be, though we do not fear a repetition of the wholesale epidemics of the past. There is occurring, apparently, a recrudescence of leprosy that threatens civilization, and it is to be expected that other disorders may extend their range and call for our serious attention if they do not materially affect our mortality rates.

What will be the problems and achievements of the coming century no man can prophesy and it would be rash to assume that equal progress will or will not be made. There are some who apparently believe that we shall solve all the mysteries of life, but they may be very much disappointed. What may be reasonably hoped for is a continuation of progress along the lines already opened, a greater perfection in technique, diagnosis and treatment, a widening of our pathologic knowledge, increasing acquaintance with the natural processes and remedies for disease, a better prophylaxis, and more than for anything else we should strive for a broader and deeper culture in our profession that will enable it not only to accumulate facts and originate theories, but to properly estimate them and utilize them.

That medicine starts in on the new round of years, greatly in advance of the position it occupied 100 years ago, is unquestioned. It has kept well abreast with the progress achieved in other fields of human endeavor. While marked by less productiveness and originality than in older countries yet American medicine during the nineteenth century has passed through a remarkable development fairly commensurate with the marvelous material progress of this country. During the nineteenth century things were achieved in medicine that were unknown and undreamt 100 years ago. But there are abundant unsolved problems left for the twentieth century to solve, and in the light of the achievements of the century just ended it is permissible to predict that great revelations are in store. During the coming years the productive activity now apparent in American medicine is bound to increase. The opportunities for investigation were never quite as promising as now. A new spirit—the university spirit—is beginning to make itself felt and to direct developments in medical education, and a corresponding elevation of standards in all lines of work is already apparent.

While assured that American medicine in the twentieth century will take an active part in the advancement of medical sciences, the sociologic relations of medicine in this country offer problems of great importance. There is need above all things for a greater public faith in the teachings and the advice of the medical profession in matters relating to hygiene and to the prevention of disease. Hygiene should dictate to legislators and courts of law and not economic interests alone. "Unfortunately on the human race there still weighs that fate by which both preventable diseases and premature deaths, as well as duration of life itself, essentially depend on economic institutions." There is hope that the twentieth century may witness great improvements as knowledge is disseminated and the mass of the people learn to place confidence in medical teaching.

The medical college in the coming century will have to give more attention to the quality than the quantity of its output, if present signs are not misleading. Human nature will not change; there will still be deceivers and their followers, but this will only accentuate the demand for higher qualifications in our profession. The future of science is not in doubt; the world will not stop in its progress nor loose what it has gained, but the future of the medical profession is in its own hands and can only be assured by its living up to its higher ideals.

THE IMPORTANCE OF EARLY DIAGNOSIS IN CARCINOMA OF THE UTERUS.

The section on gynecology of the Thirteenth International Congress of Medicine, held at Paris last August, passed a resolution to the effect that while the question of the method of operations, vaginal or abdominal, in hysterectomy is still subject to discussion, the curability by surgical means of carcinoma of the uterus is affirmed. This resolution was presented at the conclusion of an exhaustive presentation and discussion of the subject of carcinoma of the uterus by such men as Ott, Cullen, Richelot, Jonnesco, Morisani, Delagenière, Fritsch, Bouilly, Faure, Jesset, Legueu and many others.

This statement of the curability of cancer was based on the fact that of the many hundred cases operated on and presented, about 10 per cent. on an average had passed the three-year limit without recurrence and could thus be classed as permanently cured. The immediate mortality of hysterectomy has been reduced to 5 per cent. or less. Excluding the small number who die from intercurrent diseases before three years without recurrence, there remain the appalling number, about 80 per cent., who die from recurrence and with very few exceptions recurrence in loco, which indicates that the disease had already advanced too far at the time of operation. Could a more forcible argument in favor of an early diagnosis and operation in carcinoma of the uterus be presented?

The responsibility of the early recognition of these cases rests especially on the general practitioner, as it is to him that the large majority of them at first appeal. Often when they reach the operator they have had symptoms of their trouble for several months, or even years. Many of these cases are not recognized earlier, because the average practitioner's ideas of carcinoma of the uterus are not based on the early symptoms, but on the terminal stage of the disease. He too often waits for a foul-smelling, bloody discharge; for pain, suffering, emaciation and cachexia; for the appearance of a large tumor; for the uterus to become fixed by invasion of surrounding parts; for the history of "cancer in the family," etc.; and in the meantime the patient is lulled into a state of false security by the statement that she has a simple "ulcer of the womb," or is having "change of life," etc. Heredity should be given no weight in the diagnosis of carcinoma of the uterus, for in over 80 per cent. of the cases reported[1] there was no history of cancer in the family. Carcinoma may extend beyond the stage of successful operation without pain, emaciation or cachexia, and the discharge may not become offensive until late in the disease. When the uterus is fixed by the invasion of surrounding parts the case is already inoperable.

Every woman, the subject of menstrual disturbances or irregularities, should be subjected to a proper careful examination. The presence in the cervix of hard nodules, of infiltration or of ulceration; or the appearance in a woman past the menopause, of a discharge, even though it be but watery, should excite at once a suspicion of malignancy, and proper steps should be taken without delay to establish a correct diagnosis by microscopic examination of the uterine scrapings or of a section of the cervix, as the case may be.

The general practitioner should realize his responsibility in these cases. Not only is an early diagnosis necessary, but an early operation as well. An operation must be considered not the last, but the first resort. Women should be taught the necessity of an examination when any of the many symptoms of carcinoma appear.

1 Cullen: Cancer of the Uterus, 1900, p. 651.

A NEW METHOD OF TREATING PULMONARY TUBERCULOSIS.

Probably no disease has had as many remedies recommended for its treatment as pulmonary tuberculosis, but we are as yet without one of which it can be said that it exerts a directly curative effect. Of antiseptics capable of inhibiting the tubercle bacillus there is none that will not equally injure the tissues of the body. Nevertheless, the last decade has witnessed a noteworthy diminution in the morbidity and the mortality of tuberculosis as a result of advances in hygienic and prophylactic methods generally and of improved methods of treatment, based on more enlightened etiologic conceptions. It is agreed that recovery does take place from pulmonary tuberculosis, at times spontaneously, at other times in conjunction with adventitious aid, and the object of treatment should be the stimulation and the fortification of the natural processes of resistance and antagonism to the tubercle bacillus and its products. The most valuable means at our command for these purposes consist essentially in improvement of the general nutrition through air and food and a proper adjustment of rest and exercise.

In the Harveian Lectures of the current year, Dr. Robert Maguire discusses the prognosis and treatment of pulmonary tuberculosis and relates some interesting clinical and experimental observations of a therapeutic nature. He satisfied himself that neither by subcutaneous injection, by administration by the mouth, nor by direct injection into the lungs was any effect produced on the tubercle bacillus or its congeners, the staphylococcus pyogenes and the pneumococcus. It suggested itself to him that the lungs could be reached most directly through the venous system, but he found mercuric cyanid and potassium iodid, for instance, too dangerous to be used on human beings. Diastase in solution, cytase and nucleinic acid had too little effect to justify their employment, and besides they caused marked febrile reaction. Finally, formaldehyd, which has been shown to be capable of a destructive effect on tubercle bacilli, was employed in normal salt-solution in a strength of 1 in 2000, of which 50 c.c. were injected into the veins by means of a special apparatus, and the results claimed seems to be encouraging. In all of fifty cases of advanced pulmonary tuberculosis, improvement was noted

in the clinical signs, with diminution in the amount of expectoration and disappearance of tubercle bacilli from the sputum.

We have no wish to be pessimistic, but a rather disappointing experience has taught us not to expect too much from any method of treatment for pulmonary tuberculosis that has not been on trial for years and has sustained its early reputation. Too often have we read reports almost identical with those cited, but time has merely proved the fallacy of generalizing upon insufficient experience. Besides, we doubt if the intravenous method of treatment will ever become a popular or even generally commendable one, as it offers numerous opportunities for grave accidents. We are hopeful that a specific for tuberculosis will yet be discovered, and we believe that it will be of biologic origin, but it must be borne in mind that the infection in cases of pulmonary tuberculosis often becomes early a mixed one and we may then have to do with serious complications. The treatment, therefore, will always have to be general and be directed both to the constitutional state as well as to the local lesion.

DISEASES FROM VEGETABLES.

Some time ago THE JOURNAL[1] noticed editorially an epidemic of typhoid in an eastern institution that was traced to eating raw celery, and incidentally pointed out the possible dangers of eating uncooked garden vegetables. Quite recently a series of observations have been made by Professor Gualdi, of the Bureau of Hygiene, at Rome, on the relations existing between the occurrence of typhoid and the consumption of raw vegetables. As reported in the Rome correspondence of *The Lancet*,[2] he finds a close connection between the two, the seasonal curve of typhoid corresponding very closely to that of the quantity of such vegetables sold in different months of the year. Neither the water-supply nor milk contamination are able to satisfactorily explain the facts that can be accounted for in this way.

At Padua a careful and extended microscopic and bacteriologic study of garden vegetables has also been carried out by Professor Ceresole which clearly demonstrates their importance as typhoid-producers. After first thoroughly washing them with the excellent local aqueduct water, the vegetables—lettuce, endives, radishes, fennel and celery—to put them in the condition in which they are usually eaten, they were cut up fine with sterilized scissors and placed in a flask of distilled and sterilized water. After a thorough shaking the water was examined microscopically and bacteriologically. The microscopic examination revealed, besides a host of innocuous forms, amœba coli, balantidium coli, isotrica prostoma and anguillula stercoralis, together with eggs of tenia, oxyuris ascaris, trichocephalus and ankylostoma. The bacteriologic examination revealed such a host of species that identification of every one was impracticable, but among them were found bacillus coli, septicus, tetani, and a form indistinguishable from B. typhosus. Six animals inoculated with washings, after they had been some minutes heated, all died, five from malignant edema and one from tetanus. Four animals were inoculated with washings not heated, one died with malignant edema, one with tetanus and the other two had locally at the point of inoculation large abscesses from which pure cultures of streptococcus and staphylococcus were obtained.

If vegetables elsewhere are at all comparable, as regards their pathogenic associations, with those of Italy, vegetarianism ought to be at a discount and most of us would do well to make our wills. It is probable that germs enough abound and that we occasionally suffer from their activity; certainly there is good reason to be cautious in eating uncooked vegetables. The fact that ordinary washing is not sufficient to destroy or remove them, as is indicated by Professor Ceresole's experiments, is important, as is also the fact that he states that a half-hour's soaking in a 3 per cent. solution of tartaric acid—about one ounce to the quart of water—is an efficient disinfectant. The danger is one worthy of investigation and while it is not so imminent as it might appear, since most of us must have acquired a certain degree of immunity, yet the products of the truck gardens in the vicinity of large towns, particularly in continental Europe, are not above suspicion of contamination of a possibly dangerous type. It would be well for those investigating obscure causes of epidemics of typhoid to bear in mind this possible causation.

1 Vol. xxxiv, p. 240. 2 November 24, p. 1540.

MOB LAW IN COLORADO.

The Denver *Medical Times* for December contains as its editorial leader a lucubration which, though its title is "Mob Law in Colorado," in tone is distinctly apologetic for the recent atrocious lynching where a negro was burned at the stake. If the lack of provision for capital punishment in Colorado's laws involves the alternative of such occurrences, the sooner hanging is reinstated the better; there ought to be no lack of executioners since so large a portion of the community are willing to volunteer not merely as hangmen, but as torturers. The proceeding was a disgrace to the age and to the state, and while we can recognize the possibility of a temporary delirium affecting the community, its late condonation has not even this excuse.

EDITORIAL CHANGE IN THE PHILADELPHIA MEDICAL JOURNAL.

Dr. George M. Gould has retired from the editorship of the *Philadelphia Medical Journal*, Drs. John Hendrie Lloyd and Julius L. Salinger assuming charge of the editorial management. This announcement will be a surprise to most of our readers, as it was supposed that Dr. Gould was inseparably connected with that journal. We doubt, however, if he will stay out of medical journalism long, as it is a work he loves and for which he is well fitted. He has always stood for high ideals in medicine and medical journalism and his continued absence from the editorial ranks would

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be a loss. While it is reported that the *Philadelphia Medical Journal* has sunk a large amount of money in the three years of its existence, this does not reflect on the editorial management, but rather on the lack of business sagacity of those who put money into it. It does not require much of a mathematician to figure up the cost of paper, press-work, typesetting and postage; there need be no guess work about this. And when to these figures are added the other expenses connected with such an enterprise, which can be fairly well estimated, it ought to have been known that at the price charged a loss must result. If such a losing enterprise affected only those who backed it financially, it would be a serious matter to them alone, but in this instance it has a demoralizing effect on legitimate medical journalism.

THERAPEUTIC NIHILISM.

Optimism, not pessimism, is needed in medicine; not, however, the optimism that takes up each new fad to the exclusion of old and tried measures, but the kind that begets hopefulness and confidence. There is a tendency, among a few, to therapeutic nihilism that is to be regretted. He who has watched a huge cardiac edema subside under the intelligent administration of digitalis, or who has seen an angry tertiary syphilid fade away under full doses of potassium iodid, or, above all, who has seen the threatening false membrane of diphtheria shrivel and fall after the use of antitoxin can never honestly express a disbelief in the benefits of modern therapeutics. Those who are yet opposing the use of antitoxin argue chiefly from *a priori* reasoning. The men who are treating diphtheria with antitoxin and who are old enough to compare their own results under the old means with those since they began to employ the new, have another tale to tell. The therapeutic nihilist has no place in modern medicine; now the science of therapeutics is becoming thoroughly rational. Profession of disbelief in measures for aiding in healing of disease is a confession of personal failure in practice. The fault is in the man, and not in the method. Many diseases yet baffle us, and many of our agents are not yet perfect, but the spirit that will lead to a better state of affairs is only that of hopefulness and of belief in the capacity of medical science to grow until more and more diseases are conquered.

THE TOXIC EFFECTS OF FORMALDEHYDE (FORMALIN).

The general use made of formaldehyde—especially in the form of the commercial 40 per cent. solution in water, known as formalin—as a disinfectant, as an embalming fluid by undertakers, and in histologic laboratories makes the experimental study of its toxic effects desirable. In a preliminary communication, Martin Fischer[1] shows that the inhalation of formaldehyde produces a marked inflammation of the respiratory tract. Injections into the stomach produce a variety of symptoms, and even sudden death; apparently the intensity of the symptoms and the degree of histologic disturbances bear no direct relation to strength or quantity of formalin introduced. Intense congestion, extensive necrosis and inflammatory reaction occur. Intraperitoneal injections produce a fibrino-hemorrhagic peritonitis of varying intensity, according to the strength of the solution. Subcutaneously injected, formalin produces a marked exudation and leucocytic infiltration. The eye is especially sensitive to the action of formalin. A single drop of concentrated formalin may injure the eye permanently, due largely to an intense edema of the eye-lids, which are prevented from closing. Various degenerative changes and focal necrosis are seen in the liver and the kidneys, no matter where formalin is introduced into the body. The leucocytic infiltration after the introduction of formalin is characterized by the eosinophiles appearing the first, followed by other polymorphonuclear forms, the small mononuclears appearing last. Fischer believes that osmotic disturbances are to be held accountable for the exudation and the cellular necrosis. Deleterious chemical action causes the changes seen in organs distant from the point of injection. A substance as active as formaldehyde, and in so general use, is of much toxicologic importance and, judging from Fischer's experiments, it certainly behooves all that employ this substance to exercise the greatest care, lest serious accidents happen.

1. Journ. Boston Soc. of Med. Sc., 1900, v, 18-22.

LAY MANAGEMENT OF MEDICAL INSTITUTIONS.

It is a common practice of politicians, and sometimes also of lay professional philanthropists and others, to charge physicians with a lack of business or so-called executive ability and to therefore insist upon lay management of medical institutions. It is very exceptionally the case that facts justify this assumption, while a very large number of cases can be cited where lay management is unbusinesslike and even disastrous. The needs of a medical establishment, and especially of a hospital, can only be fully appreciated by a medically-educated man, and it often happens that while finances may be economically administered, the real purpose of the charity is to a greater or less extent frustrated by the ignorance or obstinacy of its lay administrators. Even this judicious management of funds is not the universal rule and the worst financial scandals occur under just such conditions. The *Medical Press and Circular* editorially mentions an instance of fatuous financing of a public charity by lay managers that strikingly illustrates this point. The oldest and best known ophthalmologic hospital in Great Britain, until recently, occupied freehold premises of immense and increasing value. On the plea that they were inadequate the committee sold the premises, transferring the hospital to grounds involving a yearly rental of thousands of dollars and heavy taxes. Then they sank the amount derived from the sale of their old site in their new building and deprived the hospital of apparently its only permanent asset. It is said, moreover, that the charities commissioners will require that the value of the site be made up within a definite period, thus making an additional charge upon the hospital. Altogether it appears to be about as bad a piece of financing a trust as can well be imagined, but it is not without its counterparts. Medical administrators may have their faults, but they could hardly be worse than their lay confrères; they have, moreover, what the others lack, a professional

interest in their charge and we believe also, as a rule, a feeling of professional honor, which is a better insurance of honest administration than much of the average business principles extant. It may be that sometimes these latter, as our English contemporary strongly hints, are not used to the best advantage of medical trusts confided to the care of business men.

PROFESSIONAL APATHY.

The *Practitioner* editorially bemoans the apathy of the majority of the members of the medical profession. As an illustration it cites the annual meeting of the Fellows and Members of the Royal College of Surgeons, of England, at which only ten of the 1300 Fellows and less than three-score of the 17,500 Members thought it worth while to attend. The meeting is characterized as representing nothing "but the total indifference of the body corporate to the affairs of the College." As a remedy it recommended, and wisely too, that the members be given a share in the management of the College, which it seems that they do not have now. By so doing it is hoped that the members may be roused from the apathy that now delays and hinders the removal of grievances and disabilities of the medical profession in England. This goes to illustrate that in this case, as in so many others with which we are more directly familiar, it is largely the fault of the physicians themselves that the "well-being of the medical commonweal" is allowed to suffer neglect. How many a time throughout our various states has not a worthy cause of vital interest to the medical profession been ruined by careless advocacy? Whenever the medical profession joins its efforts in a movement concerning the earnestness of which there is no doubt it is quite sure to carry its point. As indicated by the *Practitioner*, in commenting on some remarks in THE JOURNAL for November 3, on "Medical Men in Politics," "is it not mainly the fault of the doctors themselves that they are so poorly represented in the legislative councils?"

THE BACTERIOLOGY OF YELLOW FEVER.

Walter Reed and James Carroll have made a comparative study of the biological characters and pathogenic actions of bacillus X of Sternberg, bacillus icteroides of Sanarelli, and the hog cholera bacillus.[1] The results will be of much interest to those who have followed the controversy in regard to the etiology of yellow fever, which has been going on for some time between these authors and Sanarelli. Reed and Carroll conclude that Sternberg's bacillus X belongs to the colon group, and that Sanarelli's bacillus icteroides, proclaimed by its discoverer to be a cause of yellow fever, is a member of the hog-cholera group, because the various channels of infection, the duration of the disease and the gross and microscopic lesions in mice, guinea-pigs and rabbits are the same for B. icteroides and the hog-cholera bacillus. Comparison of the cultural characteristics also indicate that bacillus icteroides should be put among the hog-cholera group of bacteria. The hog-cholera bacillus of Salmon and Smith and bacillus icteroides produce the same clinical symptoms and anatomical lesions by intravenous injections in dogs. Bacillus icteroides, when fed to domestic pigs, causes fatal infection with diphtheritic, necrotic and ulcerative lesions in the digestive tract, such as are seen in hog-cholera. Guinea-pigs may be immunized with sterile cultures of bacillus icteroides from a fatal dose of the hog-cholera bacillus and vice versa; and rabbits may be immunized from a fatal dose of the hog-cholera bacillus by increasing doses of living cultures of bacillus icteroides. Serums of animals immunized with bacillus icteroides and with the hog-cholera bacillus, respectively, show a marked reciprocal agglutinative reaction. The blood of yellow fever practically does not exercise an agglutinative reaction upon bacillus icteroides, while the blood of hog-cholera agglutinates this bacillus in a much more marked degree. Add to this the fact that bacillus icteroides may be absent from the blood of yellow-fever patients during life and from the blood and the organs after death, and it seems quite evident that bacillus icteroides can not be regarded as bearing any closer relationship to yellow fever than that of an occasional secondary invader. The essential outcome of the matter is that the etiology of yellow fever is still an unsolved problem.

1 Jour. Exp. Med., 1900, v, 215-270.

POLYMYOSITIS.

Although inflammation of muscle is not a rare complication of other diseases, it is exceedingly uncommon as a primary and independent affection. It is likely that the muscular involvement of acute rheumatism is inflammatory in character, and it may be that a part of what we are accustomed to designate subacute or muscular rheumatism and some forms of myalgia are also of like nature. It seems, further, not impossible that some cases diagnosed neuritis are complicated by, if not primarily a condition of, myositis. Some difference of opinion prevails as to whether the several varieties of primary muscle-inflammation are identical in character, though differing in degree—dependent upon the same cause, and the symptomatology varying with the virulence and the volume of the infecting agency on the one hand and the susceptibility of the individual attack on the other hand—or, whether the etiology is diverse and multiple. A clinical and pathological distinction can be made between purulent and non-purulent myositis; and of the latter, three varieties can be recognized, namely, dermatomyositis, hemorrhagic polymyositis, and polymyositis associated with multiform erythema. To the small number of cases of acute hemorrhagic polymyositis on record Struppler[1] adds the report of another, occurring in a laborer, 33 years old, and terminating fatally from edema of the larynx in the course of six days. The onset was sudden, without prodromes, and the clinical manifestations included articular pain, moderate elevation of temperature, profuse sweating, increased pulse-frequency, cutaneous hemorrhage, tumefaction and infiltration of various muscles of the upper and lower extremities, with slight superadjacent doughy edema, glossitis, angina, edema of the larynx and fibrinous pleurisy. Post-mortem examination disclosed polymyositis of the supinators and extensors of both arms, with hemorrhagic extravasations in the muscles and the skin and in the palatopharyngeal arch, the peritracheal tissues and the lungs. The heart was not involved. The spleen was

1 Deutsches Archiv f. Klin. Med., Bd. lxviii, H. 5 u. 6., p. 407.

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slightly enlarged. Struppler reports also a case of recurrent acute rheumatic polymyositis associated with multiform erythema, occurring in a painter, 24 years old, with involvement of the frontal muscles and the left temporal muscle, which suddenly became the seat of a tender edematous swelling, in addition to the gastrocnemii and the right peroneus brevis.

Medical News.

CALIFORNIA.

DR. JOHN FIFE, Red Bluff, has been appointed physician of Tehama County at a salary of $80 per month.

THE POSITION of health officer of Humboldt county was abolished by the supervisors, December 12. What the county will do after January 1 without a health officer is a matter of conjecture and even the supervisors who abolished the office are ignorant as to the outcome of their order.

THE CALIFORNIA HOSPITAL, Los Angeles, at the annual meeting of its stockholders, December 18, elected Dr. Fred T. Bicknell, president; Dr. Everett R. Smith, vice-president; Dr. Walter Lindley, secretary and manager, and Dr. William W. Hitchcock, treasurer. During the two years and four months since the hospital was opened, 2325 patients have been treated, and the capacity of the institution has been nearly doubled in the last year, by the construction of an annex.

THERE IS TROUBLE in San Francisco because the Pacific Coast Regular College of Medicine, a night medical school, incorporated in May, 1900, proposes to graduate seven students this month. It is claimed that 2 of the 7 would-be graduates have no certificates showing that they have taken the requisite courses of study and passed the required examination. There is nothing in the law of California to prevent any enterprising person from incorporating himself and a few of his friends as a medical college and thereafter issuing degrees after compliance by the graduates with such requirements as may seem to suit him best. Dr. Dudley Tait, of the State Board of Examiners, says he will oppose the granting of licenses to the graduates of this school.

PLAGUE REPORT.

The case of a man residing at 844 Washington street, with suspicious symptoms of plague, was reported to the health office on December 6. Dr. Kellogg, the city bacteriologist, saw the man at 4.30 p. m. of that day with Drs. Morrissey and Pratt. They found a Chinaman, named Lee Ho, in a comatose condition, pulse 146 and very weak. The temperature was not taken, but the man's body was very warm to the touch, while the extremities were cool and cyanotic. There were no petechiæ in the skin. There was a very large and tender bubo in the left femoral region. Blood would not flow from the ear, but the bloody fluid secured by aspiration of the bubo showed numerous plague bacilli. The people in the house could give no intelligent account of his illness, but said he had been sick only six days. The patient died the next morning at 10 a. m. and Dr. Kellogg performed an autopsy on the afternoon of the same day. Drs. Rykfogel, Kinyoun, Wilson, Morton, and Brown being present. The subject was a well-developed, well-nourished medium-sized male. The heart and lungs were normal, the right lung being bound down by extensive adhesions. There was about 15 c.c. of blood-tinged serum in the pericardium, and about 60 c.c. in each pleura. The liver was fatty. The spleen was about twice its normal size, dark red and soft, a cut section showing whitish specks scattered over its surface. The kidneys were normal in size, dark in color, and considerable fluid blood exuded from their cut surfaces. Their capsules stripped easily. The mesenteric glands were slightly enlarged. The small intestines contained a few submucous hemorrhages. The diagnosis in the case of Lee Ho has been fully confirmed by inoculating animals with a pure culture obtained from his blood the day before he died. The guinea-pig died in three days with typical plague lesion, and the organism was obtained in pure culture from its spleen.

COLORADO.

DR. WILLIAM L. KELLER, acting post-surgeon at Fort Logan, Denver, has been assigned to duty in the Philippines. He has been succeeded by Dr. Louis Brechemin.

DR. MARY KAVENY, Denver, who recently brought suit against Dr. Clayton Parkhill, for $10,000 damages, because of an alleged shortening of one quarter of an inch in a leg treated by him, has refused to allow X-ray photographs to be taken of the leg, and in consequence the suit will probably be dropped.

THE SECRETARY of the State Board of Health states that there are 50 cases of smallpox in El Paso county, 16 in the Cripple Creek district, 25 in Pueblo, 20 in Denver and 10 in Clear Creek county. There are also scattering cases in nearly all the mining camps. Extra precautions are being taken by the local health boards.

CONNECTICUT.

TWO NEW HAVEN PHYSICIANS, Percy D. Littlejohn and Alfred G. Nadler, have offered their services as medical examiners in the public schools, free of charge.

THE COMMISSION appointed by the National Association for the Study of Epilepsy, to collect statistics relative to the malady and to assist in a movement to establish a state asylum for epileptics, consists of Drs. Frank K. Hallock, Bridgeport; Max Mailhouse, New Haven, and Edwin A. Down, Hartford.

THE GENERAL HOSPITAL SOCIETY of Connecticut has agreed to allow Yale University to erect a clinic building for its medical school, on the hospital grounds in New Haven. The building will cost $3500 and is to be used by professors and instructors of the medical school. The university will pay a small rent for the current expenses of the building.

THE HARTFORD HOSPITAL held its annual meeting December 19 and announced the following changes in its staff: Dr. Frederick T. Simpson becomes consulting physician and surgeon; Dr. Everett J. McKnight succeeds the late Dr. Melancthon Storrs as visiting surgeon, and Dr. Walter R. Steiner is appointed pathologist and bacteriologist in place of Dr. John B. McCook, who is made assistant surgeon.

DELAWARE.

SURGEON HIRAM W. AUSTIN, U. S. M.-H. S., has been appointed medical officer in charge of the national quarantine service on the Delaware river and bays, which includes the quarantines at the Delaware Breakwater and Reedy Island.

THE MEDICAL EXAMINING BOARD, representing the president and fellows of the Medical Society of Delaware, met at Dover, December 11, 12 and 13, to examine candidates for licenses to practice medicine and surgery in the state. Seven candidates appeared.

THE RESULT of the execution of the law regulating the practice of medicine and surgery in the state is shown in the report of the medical examining boards for the year. Of regular medical colleges, 61 graduates applied; of homeopathic colleges, 13. The failures to pass occurred in the cases of 14 regulars and 1 homeopath.

ILLINOIS.

THE MAYOR of Moline has appointed W. A. MacBeth, a civilian, as a director of the hospital board to succeed Dr. A. H. Arp.

C. A. LUNDGREN, a magnetic healer, of Moline, was fined $100 and costs on December 21, for practicing medicine without a license. He was committed to jail on his refusal to pay his fine.

EVANSTON HOSPITAL is to be improved by the erection of the new Herman D. Cable memorial building, a three-story isolation, a boiler-house and numerous improvements to the present buildings, at an expense of nearly $50,000.

Chicago.

THE ISOLATION HOSPITAL received two smallpox patients on December 29, neither of whom had been vaccinated.

THE EXECUTORS of the will of the late George M. Pullman have paid Mary Thompson Hospital $10,000; St. Luke's Hospital $20,000, and Presbyterian Hospital, $10,000.

ST. LUKE'S HOSPITAL and two of its attending staff have been sued for $5000 damages because a boy treated at the institution and in the service of the two gentlemen, died of tetanus twelve days after a gunshot wound of the hand.

FOR THE WEEK ended December 22, the mortality of the city was at an annual rate of 14.73 per 1000. An unusual proportion of the 480 deaths occurred in those over 60 years of age—105 or nearly 22 per cent. Pneumonia caused more than 20 per cent. of the deaths.

BY AN AGREEMENT filed December 20, Thomas J. Kent and wife turn over to Wesley Hospital $25,000 to be used in constructing the hospital building, contingent on the payment of a 6 per cent. annuity to the donors, upon whose decease the gift is made absolute to the hospital.

THE FUNERAL SERVICES of Dr. Ephraim Ingals were held at his residence, December 20. Drs. N. S. Davis, Sr., Daniel R. Brower, Walter Haines, F. C. Hotz, Arthur D. Bevan, John Bartlett and J. Nevins Hyde were among the honorary pall-

bearers, and Drs. J. M. Dodson, J. E. Rhodes and J. Clarence Webster were the physicians among the active pallbearers.

INDIANA.

DR. ROBERT C. ROGERS, Bloomington, has been appointed acting assistant-surgeon in the army, and has been assigned to duty in the Philippines.

THE REPRESENTATIVE from Daviess county in the state legislature is to introduce a bill providing that only physicians shall be eligible for coroner.

DR. WILLIAM N. WISHARD, Indianapolis, has been appointed a member of the State Board of Health, vice Dr. P. Henry Jameson, Jr., Indianapolis, resigned.

THE CONTRACT for the hospital for the incurable insane, which is to be erected in the grounds of the Central Hospital for the Insane, has been awarded, the contract price being $86,728.

SMALLPOX continues to increase in the state. Dr. James N. Hurty, secretary of the State Board of Health, has received reports of 100 new cases during December. The total number of cases reported since November 1, is 250, and of these 60 occurred in Allen county.

THE STATE BOARD OF HEALTH has considered three points of medical legislation which it is proposed to lay before the general assembly at its coming session: 1, examination of all applicants for license to practice medicine; 2, that county clerks shall keep on file as a matter of record in their offices the certificates which the State Medical Board send to them, on which they issue license to medical practitioners, and 3, the enactment of a law defining the phrase "practice of medicine."

COMPULSORY TREATMENT of liquor and drug habitués is the object of a bill to be introduced at the coming session of the legislature. The bill provides that any habitual drunkard who is a public charge or likely to become a public charge may, on application to the county judge, either in person or by friend or near kin, making oath to the facts in the case, be sent to an institution in which inebriates are cured. The expense, not to exceed $100, is to be paid by the county of which the beneficiary is a resident. Provision is made for the repayment of the money so expended, by the one benefited giving his note to the county commissioners and paying it as a whole or by installments.

IOWA.

DR. LEVI LOAR, Selma, was found guilty on December 14 of performing a criminal operation on a young girl and sentence was deferred.

THE METHODIST STATE HOSPITAL, Des Moines, which has been obtained by remodeling the Callanan college, is almost ready for opening.

AGATHA HOSPITAL, Clinton, was dedicated December 17. The building is 57x84 feet, three stories in height, and was erected at a cost of about $20,000.

THE IOWA COLLEGE OF PHYSICIANS AND SURGEONS, which has been conducted for several years as an auxiliary school to Drake University, Des Moines, has been merged with the university.

THE SUPREME COURT of the state has rendered a decision in the case of the State vs. W. M. Bair, which holds that the law requiring itinerant physicians to scure a license from the state board of medical examiners is constitutional.

THE STATE BOARD of Medical Examiners met at Des Moines, December 18, and refused to issue a certificate to an osteopath, a graduate of the Still College of Osteopathy, Des Moines. The board has also declined to grant licenses to practice to graduates of schools of the same character at Quincy, Ill., and Kirksville, Mo.

KANSAS.

THE PHYSICIANS of Leavenworth met on December 4 and paid a last tribute to the memory of the late Dr. Jesse W. Brock.

THE HUTCHINSON Board of Health has organized with Dr. Attila M. Hutchinson, chairman, and Dr. Cornelius A. Mann, secretary.

THE MAIN BUILDING of Stormont Hospital, Topeka, was burned, December 20, with a loss of $10,000. The eight patients who were in the hospital were removed in safety to the Santa Fe Hospital.

SINCE DECEMBER physicians in Topeka who have not registered at the city physician's office in compliance with the city ordinance, are liable to a fine of $25. At last report 49 had failed to register.

LOUISIANA.

DR. ULYSSES G. TALLEY, New Orleans, was fined $25, December 11, for delaying to notify the board of health of a case of smallpox for two days.

DR. WILLIAM J. EMMER has been elected president of the reorganized New Iberia board of health, the other medical member being Dr. Alfred Duperier.

IT IS PROPOSED by the New Orleans Health Department to introduce the Bertillon system of classification of causes of death with the opening of the new year.

THE HEALTH DEPARTMENT of New Orleans asked the city council for $31,000 to carry on its work, but the council cut down the estimate $26,000. The officers say that they will be compelled to discharge the whole sanitary force on January 1 for lack of funds to pay salaries.

THE SENSES HOSPITAL, New Orleans, elected the following medical staff on December 12: Drs. Ernest E. A. Robin, Richard W. Salter and Timothy A. Duggan assistants in the eye department; Drs. Ambrose B. Gaudet, and H. J. Dupuy, assistant surgeons in the ear, nose and throat departments; Dr. Lieven De Poorter, resident surgeon for one year; Dr. Isadore Dyer, consulting dermatologist, and Dr. Gordon King, surgeon of the ear, nose and throat department.

MAINE.

LOWELL EMERGENCY HOSPITAL has been incorporated at Kittery, capital stock not stated, to maintain an emergency hospital and dispensary.

THE SAGADAHOE EMERGENCY HOSPITAL, Bath, has recently been opened by Dr. Edwin M. Fuller. It contains all necessary equipment for the treatment of emergencies.

THE MAINE EYE AND EAR INFIRMARY held its annual meeting at Portland, November 26. Dr. Eugene E. Holt, executive surgeon of the institution, reported that 1396 patients had been treated during the fiscal year: 749 in the eye department, 258 in the ear department, and 248 in adjunct clinics.

DOVER has now 14 cases of scarlet fever, making in all about 40 cases since the end of September. All except two of the schools have been closed, and the Board of Health has now requested parents to keep their children confined to their own premises for a few weeks, to prevent the spread of the disease.

MARYLAND.

THE ONE HUNDRED AND THIRD annual report of the Maryland Hospital for the Insane at Spring Grove, Catonsville, shows that there were 626 patients in the institution during the year and 510 at its close. The superintendent recommends the erection of an industrial building for the female inmates.

Baltimore.

THE HEALTH COMMISSIONER has taken steps for the sale of the old quarantine property, the proceeds from which are to be devoted to the establishment of a hospital for infectious diseases.

A FIRE took place in the library and laboratory of Dr. Howard A. Kelly on December 16, which damaged books and furniture to the extent of $2000, and the building to the extent of $600.

BALTIMORE UNIVERSITY HOSPITAL was damaged by fire to the extent of $1000 or $1500 by fire shortly after midnight December 18. The patients were all rescued. The books, etc., in the faculty room were destroyed, but the prompt response of the fire department saved the building from entire destruction.

DR. WALTER WICKS has resigned as assistant resident physician at the University of Maryland Lying-in Hospital. Dr. A. C. Hoyt, third assistant on the surgical staff of the Maryland University Hospital, will succeed him and Dr. A. J. Edwards, of Winston, N. C., one of the assistant resident physicians at the hospital last year, will fill Dr. Hoyt's place.

THE NUMBER of cases of diphtheria reported for December was only about half that of last December. The decrease is attributed by Dr. Bosley to the enforcement of the new law of the department prohibiting public funerals of persons dying from the disease, and the quarantining of infected houses. The people accept the new rule kindly and coöperate with the department in its execution.

MASSACHUSETTS.

DRS. EDWARD C. FROST and THOMAS H. MCCARTHY have been appointed members of the staff of the Brockton Hospital.

DR. JOSEPH B. HOWLAND has succeeded Dr. Archibald J. Ranney as assistant superintendent and physician at the State Almshouse Hospital, Tewkesbury.

THE TRUSTEES of the Dickinson Hospital, Northampton, have received a donation of from $15,000 to $20,000 for the purpose of building an annex to the hospital 50x30 feet in extent.

THE WALTHAM BOARD OF HEALTH has issued notices to all physicians in its jurisdiction to report at once all cases of typhoid fever. The board has made an investigation to ascer-

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tain the source of the infection which has caused so many cases of the disease and has traced it to a farm on the outskirts of the city which supplied milk to many of the families where the disease existed.

MICHIGAN.

DR. JAMES E. MEAD, Detroit, has been appointed acting assistant-surgeon in the army.

LICENSE to practice was refused to about forty applicants in Wayne County by the State Board of Registration.

DR. JAMES H. KELLOGG, Battle Creek, was stabbed, but not seriously wounded, by an insane patient, December 22.

A NEW SANATORIUM is planned on Manitou Beach, Devil's Lake, twenty miles south of Jackson, by a syndicate of physicians.

A "DIPLOMATE" of the notorious Independent Medical College was arrested at Grand Rapids, December 17, on the charge of practicing medicine without having legally registered. It is likely that this will be made a test case.

A WELL-ORGANIZED effort is to be made by the enemies of the new medical registration law to attack it at the regular session of the state legislature, and, if possible, to have it wiped off the statute books, or so changed by amendment that much of its present strength will be taken away.

MINNESOTA.

DESPITE the resolution of the Duluth Board of Education that unvaccinated children be admitted to the public schools, Health Commissioner Robinson, backed by the recent decision of the county court, stands firm and will prevent the attendance of these children at school.

ABOUT eight hundred houses at Winona have been under quarantine for smallpox during the past two months, but now from twenty to thirty patients a day are being released and there are not more than 400 cases now on hand. The disease is in a very mild form and only few deaths have occurred.

THE STATE COMMISSION appointed to investigate and report on the condition of the state asylums and hospitals for the insane is heartily in favor of the plan now being pursued in the new institutions at Anoka and Hastings. In its report special mention is made of the benefits received by patients in the smaller institutions.

MISSOURI.

DR. CLARENCE LOEB, St. Louis, interne at the City Hospital, has resigned and will be associated in practice with Dr. Carl Barck.

KANSAS CITY is to have a new pest-house 200 feet long by 20 feet wide, capable of accommodating 80 patients, and erected at a cost of $2300. On December 14, 17 patients were sent to the isolation hospital.

ST. LUKE'S HOSPITAL, St. Louis, will soon have a new building on Dedmar avenue, where a site has been purchased by the board of trustees. The amount—$100,000—required for the erection of the building has almost all been subscribed.

DR. GEORGE O. COFFIN, city physician of Kansas City, is enforcing rigidly the compulsory vaccination ordinance for school children and has asked the superintendent of public schools to furnish the board of health with lists of all school children with vaccination or no vaccination noted opposite each name.

DR. L. C. MCELWEE, secretary of the State Board of Health, has asked for a special appropriation of $25,000 to assist in stamping out variola, which has appeared in 96 out of 114 counties of Missouri. If allowed, vigorous quarantine measures will be established, which will certainly be necessary to prevent the spread of the disease.

NEW JERSEY.

DR. THOMAS N. GRAY has been appointed city physician of East Orange, to fill the unexpired term of Dr. Winthrop D. Mitchell.

ON CHRISTMAS DAY, Thomas H. Vinter, executor of the estate of the late Benjamin D. Maxham, presented the New New Jersey Training School for Feeble-Minded Children at Vineland with $100,000.

OWING to smallpox in Jersey City, the president of the State Board of Health issued an order that precautions be taken against its spread. At Lorillard's tobacco factory about 4000 girls were ordered vaccinated.

ACCORDING to the last report of the Board of Children's Guardians of the State, made to the Governor, the results prove that it has not been hard to get children out of the almshouses and place them in country homes, some free of charge, and others at a rate of $1.50 per week. Last year the legislature appropriated $2000 for this purpose, but this sum has been found insufficient. An appropriation of $6000 will be asked for.

NEW YORK.

THE sixteenth annual report of Flushing Hospital shows a large increase in donations and subscriptions, but a larger increase in expenses. The board of estimate and apportionment gave the hospital $7500 in 1899.

DR. WILLIAM P. SPRATLING, medical superintendent of the Craig Colony at Sonyea, gave a dinner at the colony to the members of the Livingston County Board of Supervisors and other invited guests, at which the work of the institution was reviewed by the members of the board of directors, and suggestions made as to opportunities for improvement.

Buffalo.

THE NEW morgue building, when finished, will be one of the most modern and complete of the kind in the United States.

THE UNIVERSITY OF PENNSYLVANIA exhibit, which was one of the most complete in the Paris Exposition education department, will be brought to Buffalo for the Pan-American Exposition.

THE BOARD OF SUPERVISORS has approved the following appropriations for 1901: Buffalo Eye and Ear Infirmary, $2200; Charity Eye and Ear Infirmary, $1800, and German Hospital Dispensary, $1500.

THE GERMAN HOSPITAL BAZAAR closed December 16. About $5000 was realized. The hospital will now receive its proper furnishings for wards and private rooms and will be ready for the reception of patients by February 1.

THE PLANS for a cancer hospital in connection with the Buffalo General Hospital have been filed with the bureau of buildings. They provide for a three-story fire-proof building, which will be used as an annex of the Buffalo General Hospital and will be erected near that institution.

MANY OF THE PHYSICIANS of Erie County, who have long been members of the New York State Medical Association, now propose to organize a county association in affiliation with it and in accordance with its charter and by-laws. A meeting of organization was held on December 20.

New York City.

DURING the last week of 1900, 23,782 persons were vaccinated in the city, 4500 of whom were inmates of lodging houses.

THE BOARD OF HEALTH decided, December 19, to use the Bertillon system in classifying the causes of death in the Bureau of Records after January 1.

THE NURSES in charge of the Bellevue Hospital alcoholic ward, who were charged with brutality toward patients, have been suspended pending further investigation and have been held by the grand jury to answer to the charge of manslaughter.

PENNSYLVANIA.

DR. M. C. WARREN has resigned as resident physician at the Reading Hospital and has been succeeded by Dr. Thomas C. Buchanan, Honeybrook.

THE COMMITTEE on public buildings and grounds has reported favorably on the Dalzell bill, appropriating $91,000 for a United States marine-hospital at Pittsburg.

THE OSTEOPATH at Beaver Falls, "Dr." E. E. Pierce, charged with practicing medicine and surgery without a license, was found guilty and recommended by the jury to the mercy of the court.

CASES OF SMALLPOX are still being found in Pittsburg in districts supposed to be free from the disease. On December 23 a case was discovered and the patient taken to the Municipal Hospital. Several other inmates of the room were also removed and taken to the hospital to prevent the spread of the disease. On December 23 an unknown man was found in one of the parks and was taken to the Allegheny General Hospital, where his condition was diagnosed smallpox. He was at once removed to the Municipal Hospital.

Philadelphia.

ON DECEMBER 24, Coroner Dugan held inquests in 24 cases. Verdicts were reached in 21 instances, and 3 have been continued.

THE CITY COUNCILS have made the following appropriations for the year 1901: Bureau of health, $207,080; bureau of charities, $576,678, and coroner, $30,300.

BY THE WILL of John Betz, recently deceased, $2000 has been given the German Hospital. This hospital has also received $1000 from the Baldwin Locomotive Works.

VIRGINIA.

THE RICHMOND Academy of Medicine and Surgery has adopted appropriate resolutions on the death of the late Dr. Frank S. Harker.

A FIRE in the Virginia Hospital, Richmond, December 10, caused great excitement and alarm, but fortunately only slight damage and no loss of life.

DR. ALBERT S. PRIDDY, Charlottesville, the nominee of the State Medical Society, has been appointed a member of the medical examining board of the state-at-large.

DURING THE YEAR 435 patients were under treatment, on the average, at the Central Hospital for the Insane. The new admissions numbered 192, and of these two-thirds were discharged cured. The board of directors will ask the legislature to make an appropriation sufficient to erect three new female wards.

GENERAL.

ON DECEMBER 11 three Franciscan nuns arrived in Honolulu from New York State. They go to Molokai to work among the lepers.

F. R. DAY, M.D., for many years a member of the Honolulu Board of Health and port physician, resigned his positions in November, and sailed a few days ago for California, on his way to Berlin, where he will take up special medical studies for two years.

LEPROSY IN THE PHILIPPINE ISLANDS.

An appended report to General MacArthur's review of the civil affairs of the Philippines for the last fiscal year gives some rather startling facts regarding the introduction and prevalence of leprosy in the islands. According to the estimates of the Franciscan fathers, says Major Guy L. Edie, the writer of the report, there are no less than 30,000 lepers in the archipelago, the major portion of these being in the Visayas. Leprosy was introduced in 1633, when the Emperor of Japan sent a ship with 150 lepers to the Philippines to be cared for by the catholic priests. Thus the seed was planted, and, as no practical methods ever were adopted to eradicate the disease or prevent its spread, it has taken firm root. A house-to-house inspection begun last January found more than 100 lepers concealed in dwellings. These were sent to San Lazaro hospital in Manila, but many others escaped into the surrounding country. A commission is now engaged in the work of selecting a suitable island or islands for the purpose of isolating all the lepers in the archipelago.

WAR ON MOSQUITOES.

The United States government has formally recognized the responsibility of the mosquito for the transmission of yellow fever and malarial diseases. This fact is indicated by the issuance of a general order by Major-General Wood at Havana, directed to his post commanders reciting that the chief surgeon of the Department of Cuba has reported that it is now well established that malarial, yellow fever, and filarial infection are transmitted by the bites of mosquitoes. The troops are therefore enjoined to observe carefully two precautions: 1, they are to use mosquito bars in all barracks, hospitals, and field service whenever practicable; they are to destroy the larvæ or young mosquitoes, by the use of petroleum on the waters where they breed. Permanent pools or puddles are to be filled up. To the others are to be applied one ounce of kerosene to each fifteen square feet of water twice a month, which will destroy not only the young, but the old mosquitoes. This does not injure drinking water if drawn from below and not dipped out. Protection is thus secured, according to the order, because the mosquito does not fly far; seeks shelter when the wind blows, and thus each community breeds its own mosquitoes.

ETHER VERSUS CHLOROFORM IN THE TROPICS.

In a report to the surgeon-general of the army on the operative work at the First Reserve Hospital, Manila, P. I., from Sept. 1, 1899, till Feb. 28, 1900, Major W. P. Kendall, surgeon, U. S. A., makes some interesting remarks on the anesthetics used. The cases included 49 of hernia, radical cure; 19 appendicitis; 15 amputations, including two of the hip-joint, one of which was successful; 35 of hemorrhoids; 13 varicoceles; 1 ligature of the external iliac, the femoral and the subclavian in its second part, all successful, and many other operations involving the use of a general anesthetic. "Regarding the choice of anesthetics," says Surgeon Kendall, "there was an apparent difference, not seen in the United States, between ether and chloroform. Whether this would disappear after a longer experience and some modified way of administration or not was not determined; but, as it was, we all grew to be afraid of chloroform, including those whose experience with it had been large, even to the exclusion almost of ether. Heart failures came on rapidly and with great severity, producing death in two chronic appendicitis cases before operation was begun. Besides these there were several cases of suspended animation, while with ether no trouble was observed. Our experience fully confirms that of those who claim that in hot countries the paralyzing effect of chloroform is greater than when used in colder climates, due, probably, to the lack of tone of the motor nerves.

DR. GEORGE M. GOULD AND THE PHILADELPHIA MEDICAL JOURNAL.

The following telegram was received after our note referring to the editorial change in the *Philadelphia Medical Journal* was in type:

PHILADELPHIA, Jan. 1, 1900.

Dr. George H. Simmons: I have just received the first official intimation that my services are no longer desired as editor of the *Philadelphia Medical Journal*, the discharge to take effect immediately. The following editorial, written from private information, was inserted in the issue of December 29, but was not allowed to appear. For considerations of courtesy to many subscribers, I would be pleased to have you publish this hurried word of goodbye to the profession. The extinguished editorial is as follows:

A Personal Word from the Editor.—Just as the last forms are going to press I learn that the present number of the *Philadelphia Medical Journal* will be the last—except as to the original article department of the next issue—for which I shall have editorial responsibility. I am unable to set forth the reasons why the board of trustees no longer wish my services as editor. I am in complete ignorance what such reasons may be. I have heard of no criticism upon their part of my conduct of the journal, and my communication handed to the board in session on December 8, expressing my desire to be retained as editor, has not been answered. To the thousands of friends, to all subscribers who may read these lines, I can only here express my most profound regret at the sudden separation. In the endeavor to aid in establishing a great independent medical journal, utterly free from publishers' influence, from commercial bias and from what is, if possible, still worse, an unprofessional spirit within the profession, I have given my labor and my life, all too freely. What mistakes I may have made I trust may be excused in the belief that they were due to a sincere desire to devote every line of the reading columns to the cause of professional truth and honor.—GEORGE M. GOULD.

FOREIGN.

TYPHOID FEVER occurred, up to September 28, in 15,655 British soldiers in South Africa, with a mortality of 3642.

A NATIONAL association of the medical press has recently been organized in Denmark, Norway, Sweden and Russia in response to the efforts of Dr. R. Blondel, of the French association, who visited the chief cities in these countries.

THE FACULTY of medicine of the University of Edinburgh, according to the *British Medical Journal*, has formally expressed its disapproval of the publication of laudatory certificates from its graduates, in trade advertisements.

THE BUBONIC plague has increased in death-rate in India to the extent of about 50 per cent. during the last month. On the other hand, the famine ceases to be a noticeable factor in mortality; at present only 500,000 require assistance.

THE GERMAN imperial bill lengthening medical study to at least 5 years, meets with the approval of the profession. Berlin has one physician to every 798 of the population, Breslau one to every 775, Halle one to every 735, and Koenigsberg one for every 681.

THE PHYSICIANS who attended the Czar in his illness have just received their rewards. Dr. Hirsch, the famous surgeon, has been given the Order of Alexander-Newski, established by Catherine the Great. Prof. Popoff has been made the Czar's body physician, and Dr. Tichokonoff honorary medical adviser.

THE BRITISH ambassador at Pekin, Sir Claude MacDonald, in his dispatches, refers to the valuable services of Drs. Morrison, Poole and Velde during the late memorable siege. The two latter were in charge of the International Hospital, where 166 cases were treated, 20 of which suffered from illness and the rest from wounds.

THE ROMAN correspondent of the *Lancet* states that a statue of Aesculapius has recently been found in the Roman Forum. The head and part of the right arm are missing. The god is represented with a *volumen* of parchment or paper in the left hand, leaning on a staff around which is coiled a serpent, the symbol of renovation. It was found near the Well of Juturna, reputed for the salubrity of its water.

PROFESSOR CELLI estimates in his new work "La Malaria," an annual mortality in Italy of 15,000 due to malaria, and states

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that 5,000,000 acres of good soil remains uncultivated. As member of the Italian parliament, he proposes to make it obligatory on landowners and employers to provide every possible agent against the scourge. It is likewise proposed that the government supply the sufferers with pure quinin at a trifle above cost price.

THE DEATH of Professor Podrèze of Charkow is announced, in consequence of a fall from his horse. The eminent Russian surgeon was in his forty-ninth year, and by his will his property, including his private clinic, is bequeathed to the Charkow university to found a clinic for urogenital diseases. Both the physicians attached to the Belgian ambulance dispatched to the Transvaal have died in the last few months.

THE *Wiener Med. Woch.* of December 1 publishes a line from Prof. Stofella to the effect that he can not subscribe in all respects to the communication purporting to be from his polyclinic in the two preceding numbers of the *Wochenschrift* on the "Medicinal Treatment of Tuberculosis," by Adolf Hoff, reviewed in THE JOURNAL of Dec. 22, p. 1635. He states that the results of his observation and experience of the treatment described have not always corroborated those of Dr. Hoff.

SANITARY PRECAUTIONS ADOPTED AT OSAKA, JAPAN.

In a letter of Dec. 4, 1900, received by the surgeon-general of the Marine-Hospital Service from the acting asst.-surgeon on duty in the office of the United States consul-general at Yokohama, it is stated that, from June 19 to November 5, 1900, 176,818 rats were destroyed in Osaka. A conference of sanitarians and quarantine officers was at that time sitting in Tokyo, under the order of the Home Department, with the object, if possible, of devising some method of combating the plague, more effective than that hitherto employed.

CANADA.

THE Montreal Health Department has created a department for the inspection of food, with Dr. J. J. McCarrey as superintendent.

DR. OSCAR F. MERCIER has recently been appointed head surgeon of the Notre Dame Hospital, Montreal. He will also be professor of the surgical clinic.

THE Hygienic Committee of Montreal has decided that hereafter three doctors be appointed to sit with the committee. For this they will receive compensation at the rate of $5 per diem.

DR. F. J. SHEPHERD, of Montreal, has just returned from Havana, where he accompanied Sir William Van Horne. He has been elected a vice-president of the Pan-American Medical Congress and president of the section on pathology. He will attend the sessions in February next.

MONTREAL GENERAL HOSPITAL.

This hospital is still in hot water financially. Fifteen thousand dollars is needed as an augmentation fund each year to enable the trustees to carry on the work of the institution. The capacity of this hospital has doubled since 1885. In that year the revenue was $39,308 and the expenditure $40,910. In 1900, the revenue amounted to $67,421, while the expenditure was $81,570, showing a deficit of $14,149. The increase in public subscriptions in that time has only been 25 per cent., but the number of out-door patients has increased from 13,000 in 1885 to 37,000 in the present year.

HOSPITAL FOR SICK CHILDREN, TORONTO.

The twenty-fifth annual report of this institution has just been issued. It covers the work done for the year ending Sept. 30, 1900. The daily average of patients for the previous year was 101½, and for the present year 111½. During the twenty-five years of the hospital's existence over 40,000 children have been treated. The total income for 1900 was $56,116, and the expenditure $36,274. The assets of the hospital now total $215,180, and a nominal liability of $3000 or $4000 is expected to be wiped out by the end of the year. In connection with this institution is the Lakeside Home for Little Children on Toronto Island, which is the largest sanitarium for children in the world.

PHYSICIANS' AND SURGEONS' SUPPLY COMPANY.

A synopsis of a plan for securing better and cheaper drugs for medical practitioners was given in the columns of THE JOURNAL some little time ago, as proposed at a meeting of the Huron Medical Association by Dr. J. R. Shaw, of Clinton, Ont. A charter has been applied for and several members of the profession in Western Ontario and also some few in Toronto are interesting themselves in forming a company to be known as the Physicians' and Surgeons' Supply Company (Limited). The success of the enterprise seems assured from the amount of stock already subscribed. The company is not meant as a combine in any way, but the druggists will be no longer compelled to keep brands of drugs to suit every doctor's whim. A meeting will shortly be held in Toronto for completing organization. Dr. Gunn, of Clinton, is the provisional president.

LONDON LETTER.

THE "EPIDEMIC" OF ARSENICAL POISONING FROM BEER-DRINKING.

The epidemic of arsenical poisoning in Manchester and the surrounding districts, which I have described in my last letter, has caused a wide-spread scare among beer-drinkers throughout England. In London the publicans are posting on their windows notices that they guarantee their beer free from arsenic. Everywhere analyses have been made of the beer sold for consumption, but outside the districts mentioned it has been found uncontaminated. In Manchester alone about 2000 people have been under medical treatment for arsenical peripheral neuritis, to say nothing of milder cases which did not come under observation. The medical officer of health of Manchester, in his report on the epidemic, states that examination of the glucose used in the 20 Manchester breweries revealed arsenic only in that of 5. This glucose all emanated from a single firm and contained arsenic in considerable amount. A number of deaths are alleged to have taken place from arsenical poisoning, but definite proof is lacking in these cases that arsenic was the cause of the fatal result. However, the statistics show that the deaths from peripheral neuritis in Manchester have nearly doubled in 1900. In the first 48 weeks of the years 1897, 1898, 1899, and 1900 the deaths from peripheral neuritis were 11, 17, 18 and 39 respectively. Persons of all ages and both sexes were affected. The youngest patient who suffered from arsenical poisoning from beer-drinking was a little girl of 2, the daughter of a publican who was petted by the customers and given small quantities of beer to drink. Two cases have been recorded in which infants at the breast were poisoned by their mother's milk and recovered when cow's milk was substituted. In one, a woman aged 32, took stout after confinement. After five weeks she felt numbness of the fingers and "jumping" in the feet; her eyes began to smart and her throat became sore. At the same time the child began to vomit after every nursing. It became emaciated and snuffled. Its feet were slightly erythematous. A number of beer-sellers in Manchester are to be prosecuted for selling impure liquor. At Salford, a town near Manchester, it is stated that 6 deaths from drinking arsenical beer have occurred. At Liverpool a number of cases of arsenical neuritis have been observed, but nothing of the nature of an "epidemic." It is interesting that in one case arsenic was found in the urine. At Chester 8 samples of beer from 7 breweries were examined, and 4 were found to contain arsenic. A number of cases of peripheral neuritis have occurred. Upward of 500 barrels of beer have been destroyed.

THE PARASITOLOGY, ETIOLOGY AND PREVENTION OF MALARIA.

At the Royal Medical and Chirurgical Society Dr. Manson gave a résumé of recent advances on this subject. In 1896-97 the cycle of the malarial parasite to the human body was studied, but the cycle external to the body was not studied. How it was introduced was not known, but since the organism was a blood parasite, some blood-sucking animal was suspected as the means of infection, and there were epidemiological and geographical reasons which pointed to the mosquito. Surgeon-Major Ross, by two or three years indomitable perseverance, conclusively proved the truth of the mosquito theory. He first studied the evolution of the coccidium Schübergii in bird malaria and found there were an endogenous and an exogenous phase. Then he found that the parasite of estivo-autumnal fever was strictly analogous. In the blood of man its evolution was asexual, in the mosquito bisexual. As to the various kinds of mosquito concerned in the conveyance of infection hitherto only anopheles had been implicated in malarial infection, and of this there were 46 known species. In 7 of these the mosquito had been found. Recent investigations have shown that children are specially susceptible to malaria; as many as 70 or 80 per cent. of native children under one year of age contract it. The proportion of infected becomes gradually smaller as age advances until 10 or 12 years is reached. An immunity of some kind seemed to be obtained by the native population. Practically all deaths from malaria occurred in children. The etiology of blackwater fever was still undiscovered. The suggestions that it might be due to a special type of malaria parasite or a parasite the virulence of which was increased by being transmitted through a particular species of mosquito, or a disease sui generis, were all tenable, but they lacked confirmation. As to prophylaxis, four means were available—to avoid the natives, to take quinin, to destroy mosquitoes, and to protect oneself against them. These measures were efficient but not always applicable. Complete protection

was perhaps impracticable, but relative protection was valuable and was always possible.

THE DIAGNOSIS OF TREATMENT OF THORACIC ANEURYSM.

At the Medical Society of London Dr. Kingston-Fowler said that the diastolic thud was a sign of the greatest value since it was present in no other condition. Tracheal tugging also indicated aortic aneurysm. The only fallacy was that a new growth almost surrounding the aorta and attached to the trachea might communicate movement to it. The treatment consisted of several factors. Rest and iodid were very efficacious in the relief of pain. If no improvement took place he then added a modified Tufnell diet. Seven ounces of solids and eight of fluids daily were the quantities he had adopted. Lancereaux' method of treatment by gelatin injections he had seen carried out in 3 cases. His experience was not favorable. One of the patients had probably been benefited. Where spasm of the laryngeal muscles existed inhalations of oxygen and the injection of morphia were useful. The prognosis of aneurysm he believed was better than was generally thought. He had known several patients to live for years—one for 13 years, another for 6, and another for 9.

Correspondence.

Origin of Leprosy in Hawaii.

KOLOA, KAUAI, H. I., Dec. 15, 1900.

To the Editor:—In your issue of November 17 last you say editorially in regard to the origin of leprosy in Hawaii, its protection by the chiefs, etc.:

"The missionary physicians soon learned to recognize it, and one of them, Dr. Dwight Baldwin, it is said, made a report of it, stating the facts of its origin. . . . So long as the Hawaiian monarchy existed, segregation of lepers, though legally demanded, was very imperfectly carried out, owing, it is said, to the interference in high places. . . . The isolation law is an unpopular one with the natives. . . . These data were obtained from the Honolulu *Commercial Advertiser*, whose authority for the main facts is the Rev. Sereno Bishop. . . . *We have not seen this bit of medical history narrated elsewhere.*"

In my article on leprosy, which appeared in the *New York Medical Record* of Jan. 27, 1900, and which was republished in book form several months ago, I said:

"The first leprous man in Hawaii that came to the notice of the general public, was a native man named Naea, who died in 1852, after having been a leper for ten years. His case was reported by Dr. D. D. Baldwin of Lahaina, who, in 1863, discovered that there were 50 lepers in his church. He was a physician as well as a minister. . . . The same year Dr. Hillebrandt, surgeon to the Queen's Hospital, wrote: 'I wish to bring to the public's notice a subject of great importance. . . . It is genuine oriental leprosy. Repeated investigations leave but little doubt in my mind about the contagious character of the disease.' . . . It was called by the natives 'mai pake,' or Chinese disease."

The name "mai alii," not "ma'i alli," as you have it—was never so current as "mai pake," which is the common name for leprosy.

"In 1864 the board of health appointed Mr. Jourdan to take a 'leper census,' and report the same. . . . In January, 1865, the King signed an act providing that certain lands be 'set apart' for 'the isolation and segregation of lepers'; that the board of health or its agents 'be authorized and empowered to cause to be confined all lepers who shall be deemed capable of spreading the disease of leprosy.' . . . With all his talk, Mr. Gibson delayed the good work of segregation, and during the time that he was president of the board of health very little effective work was done. When, later on, Dr. Emerson and others took up the health matters of the country, it was with added difficulty. . . . It was the sad fate of Dr. J. K. Smith to die by the hand of a man whose wife the doctor had ordered to Molokai."

In his official report for 1884,' W. M. Gibson, as president of the board of health, says: "But it is difficult to indulge in any reflection on the action of my predecessors because the law requiring segregation has not been carried out with rigor. For what does this law require? That men, women and children shall be torn from their homes [here is a recital of several pathetic cases]. These are some of the experiences and consequences of the law. . . . There should be no alarm in consequence of the temporary presence in the street of a leper; or on account of any ordinary intercourse with sufferers from this disease. . . . According to invariable experience in the observation of this disease in this country and elsewhere, such a sufferer may pass the healthy in the street or frequent the same room with them in the ordinary intercourse of life."

This was a shameless bid for the favor of Kalakaua and his native population. Following the report of Gibson is that of Dr. N. B. Emerson, then—1884—superintendent of the leper settlement, in which he says: "I can not refrain from remarking with great regret the comparatively small number of lepers that have been brought to this settlement from without during the past year, when one considers the great number still at large in the community. I gravely apprehend that this may prove a matter of serious regret to the Hawaiian nation in the future."

In a contribution to the *Philadelphia Medical Journal*, June 2, 1900, I said: "With 4000 lepers scattered over the group, the Hawaiian government began to segregate at first in an inefficient way, retarded often by ignorant and designing officers. . . . In the 34 years during which Hawaii has practiced segregation *the law has been really enforced in the last 14 only.*"

In respect to the first case of leprosy in Hawaii, accounts differ. Sereno Bishop thinks that Kakauonohi, a Hawaii chief, contracted leprosy in China—to which country Hawaiian ships frequently went with sandalwood—and introduced the disease among his people. In a personal interview with ex-Queen Lilioukalani she said she remembered seeing the first leper on Oahu, and that he was a chief who had been to China.

On the other hand, the government "Biennial Report," issued in 1888, says: "Leprosy was first made out to exist in this country about the year 1840, in the person of one Naea, a messenger of the chief, who died in 1852. His case was reported by Rev. D. D. Baldwin, M.D., of Lahaina, in a communication to the minister of the interior, dated May 26, 1864."

E. S. GOODHUE, M.D.

Foreign Bodies in the Ear.

BURLINGTON, IA., Dec. 30, 1900.

To the Editor: I hope that I shall not be accused of trying to make a mountain out of a molehill, but I think that somebody should at least say that your other correspondent on this subject, in THE JOURNAL of December 22, page 1643, is preaching just as pernicious a doctrine as that he assumes to condemn.

Personally speaking, after an experience of more than twenty years, with a fairly numerous clientèle, I am unable to recall a single instance where serious permanent damage resulted from retention of foreign bodies in the ear. Several years ago I removed a small piece of slate pencil—case was reported then—which my patient maintained she had poked into the canal when she was a child twenty years before. So far as I could see, it might have safely remained there another twenty years imbedded as it was in cerumen. Insects whole and in pieces I have extracted after months and years of lodgment.

On the other hand, and this I think is a common experience among aurists, or the books would not so universally speak of it, I have seen no little damage done by ill-advised and ill-devised attempts at extraction—particularly where instrumental delivery was the means adopted.

In a paper which I prepared many years ago for the annual meeting of our State Medical Society I formulated a rule, which I still hold as covering the situation. It was in this wise:

Be sure that the foreign body is in the ear. Then remember that if it is of such consistency and size that it will offer resistance to such a stream of water as you can introduce with a syringe, then the stream of warm water from a syringe, with the nozzle at the highest margin of the meatus, will bring it

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out. But the foreign body may be such that it offers no resistance—insects like mosquitos whose diaphanous wings will bend before the stream and flatten out against the walls—or the stream of water can not be thrown to the bottom of the canal on account of the swelling of the surrounding tissues or the swelling of the foreign body itself in the event of its being one of the cereals. Then remember that you must have either an experienced technique with ear instruments or you must confine yourself to an attempt to reduce the swelling only.

Personally speaking, again, I do not want any foreign bodies in my ear; but I will take my chances with the ordinary kind rather than the bent probe—or forceps—in the hands of one whose technique I do not thoroughly know. Truly yours,

H. B. YOUNG, M.D.

Marriages.

LUTHER C. FISCHER, M.D., to Miss Lucy Hart, both of Atlanta, Ga., December 12.

HARRY W. LYMAN, M.D., to Miss Sarah Long, both of St. Louis, Mo., December 12.

RICHARD FINLAY, M.D., to Miss Luella Duer, both of Centreville, S. D., November 29.

MARSHALL CLINTON, M.D., to Miss Alethe Evans, both of Buffalo, N. Y., December 12.

FRANK M. THIGPIN, M.D., to Miss Stella White, both of Pensacola, Fla., December 12.

EDWARD E. MANEY, M.D., to Miss Edna Horn, both of Caldwell, Idaho, December 19.

S. HOWELL GARDNER, M.D., Sharpsburg, Md., to Miss Harriett Christian, of Mount Carroll, Ill.

VAN E. MCFARLAND, M.D., to Miss Alice Townsend, both of Eagle Pass, Texas, December 12.

G. HUDSON MAKUEN, M.D., Philadelphia, to Mrs. Nancy Dyer, of Chester, Pa., December 20.

WILLIAM K. MURRAY, M.D., Chicago, to Miss Gertrude Ne'an of Pittsburg, Pa., December 20.

FREDERICK C. PETERSON, M.D., to Miss Sarah M. Bradford, both of Watertown, N. Y., December 31.

WILLIAM L. HAYNES, M.D., Memphis, Tenn., to Miss Clarice Hancock, of Calhoun, Ky., December 18.

CHARLES P. MARTIN, M.D., Woodstock, Ala., to Miss Willie Reid, of Russellville, Ala., December 12.

JOHN M. BLAIR, M.D., Monroe, N. C., to Miss Hannah J. SAUNDERS, of Hagood, S. C., December 27.

HIRAM D. PETERSON, M.D., Kelley's Island, Ohio, to Miss Mattie E. Cleveland, of Huron, Ohio, December 12.

MAURICE M. SCHEUER, M.D., Valley Junction, Iowa, to Miss Dora Anderson, of Des Moines, Iowa, December 11.

Deaths and Obituaries.

JOHN J. GARVER, M.D., Medical College of Ohio, Cincinnati, 1877, a member of THE AMERICAN MEDICAL ASSOCIATION, Indiana State and Marion County Medical Societies, at his home in Indianapolis, December 13, after an illness of thirteen weeks, aged 55. The Marion County Medical Society has appointed a committee to prepare resolutions on the death of Dr. Garver.

PETER F. CURLEY, M.D., Albany Medical College, Albany, N. Y., 1883, member of the State Board of Health, State Board of Medical Examiners, and of the local, state and AMERICAN MEDICAL ASSOCIATION, at his home, Newport, R. I., December 13, from Bright's disease, aged 39.

ALDEA A. GLASSCOCK, M.D., Missouri Medical College, St. Louis, 1868, at his home in Ventura, Cal., from cancer of the tongue, after an illness of several months, December 11, aged 62.

CHARLES J. O'HAGAN, M.D., New York Medical College, 1856, a member of the AMERICAN MEDICAL ASSOCIATION, at his home in Greenville, N. C., from apoplexy, December 18, aged 80.

JOHN WHEELER, M.D., Berkshire Medical College, Pittsfield, Mass., 1852, formerly president of the New Hampshire State Medical Society and a surgeon throughout the Civil War, at his home in Pittsfield, N. H., December 21, after a year's illness from paralysis, aged 72.

THEODORE GIDDINGS, M.D., College of Physicians and Surgeons, N. Y., 1868, from apoplexy, at his home in Housatonic, Mass., December 28. He was a member of the AMERICAN MEDICAL ASSOCIATION, and served in the legislatures of 1886 and 1888.

RICHARD A. WISE, M.D., Medical College of Virginia, Richmond, 1868, representative from the second district in the present Congress, from Bright's disease, December 21, at Williamsburg, Va., aged 57.

RANDOLPH H. HALL, M.D., Rush Medical College, 1882, president of Illinois Medical College, and a member of the AMERICAN MEDICAL ASSOCIATION, at his home in Chicago, December 30, aged 56.

ULYSSES H. BROWN, M.D., a prominent oculist and a member of the New York State Medical Association and THE AMERICAN MEDICAL ASSOCIATION, probably from accident, in New York City, December 28.

DANIEL F. COLLINS, M.D., Bellevue Hospital Medical College, N. Y., 1873, formerly president of the Minnesota State Board of Medical Examiners, at St. Mary's Hospital, West Superior, Wis., December 22.

GEORGE H. ELLIOTT, M.D., Denver Medical College, 1882, of New York City, a commissioner of lunacy in New York, at his father's house in Manchester, N. H., December 17, aged 56.

JAMES C. BROWNLEE, M.D., Bellevue Hospital Medical College, 1880, at the German Hospital, Kansas City, Mo., from pneumonia, after an illness of three weeks, December 19.

JUSTUS M. TOWNSEND, M.D., Berkshire Medical College, 1880, at the German Hospital, Kansas City, Mo., from pneumonia, after an illness of three weeks, December 19.

GEORGE W. GREENLEAF, M.D., Bowdoin Medical College, Brunswick, Me., 1894, surgeon of the Southern Pacific Railroad, at Yuma, Ariz., at Yuma, December 1, aged 30.

CHARLES D. WILLIS, M.D., University of Tennessee, Nashville, 1888, after a lingering illness, from consumption, at his home, Greenville, Tenn., December 13, aged 40.

R. A. ROGERS, M.D., Cincinnati College of Medicine and Surgery, 1877, of Welton, Iowa, after an operation for appendicitis, at Davenport, Iowa, December 15.

WILLIAM H. JONES, M.D., University of Pennsylvania, 1863, U. S. Navy, retired, at Bethlehem, Pa., after several years of illness, from diabetes, December 14, aged 60.

CHARLES E. ACREE, M.D., Vanderbilt University, Nashville, 1892, at his home in Eddyville, Ky., December 23, from uremia, after a long illness, aged 30.

GEORGE W. L. HOWLAND, M.D., University of Michigan, Ann Arbor, 1870, from injuries received in a runaway accident, at Flint, Mich., December 27.

VERNER L. CHESLEY, M.D., Dartmouth Medical College, Hanover, N. H., 1899, at his home in West Swanzey, N. H., December 14, from pneumonia.

ALVIN DUVAL, M.D., University of Louisville, 1878, at the home of his mother in Frankfort, Ky., after a long illness, December 15, aged 35.

LEVI OBERLIN, M.D., who had practiced medicine in Clinton, Ohio, for nearly half a century, at his home in that place, December 8, aged 73.

ANDREW J. SMITH, M.D., Northwestern University Medical School, 1871, at his home, Wabash, Ind., from apoplexy, December 22, aged 70.

ROBERT V. R. MONTFORT, M.D., Albany Medical College, Albany, N. Y., 1856, at his home in Newburg, N. Y., December 18, aged 65.

MARY E. CHRISTY, M.D., Woman's Medical College, Philadelphia, 1894, at her home in New Castle, Pa., December 14, aged 31.

JOHN E. LOSEE, M.D., Albany Medical College, Albany, N. Y., 1852, at his home in Upper Redhook, N. Y., December 22, aged 74.

CHARLES L. GWYN, M.D., University of Maryland, 1860, at his home in Galveston, Tex., December 8, from septicemia, aged 62.

DEAN M. TYLER, M.D., University of Michigan, Ann Arbor, 1859, at his home in Ann Arbor, December 11, after a long illness.

JOHN HENRY FRUITNIGHT, M.D., Bellevue Hospital Medical College, New York, 1875, at his home in New York, December 18.

ELIJAH H. GRIGG, M.D., Medical College of Virginia, Richmond, 1860, at Sheppards, Buckingham County, Va., December 20.

FREDERICK OSBORN LLOYD, M.D., New York University, 1885, December 19, at Hamilton, N. Y., from consumption, aged 40.

WILLIAM P. GATLIN, M.D., University of Louisville, Ky., 1888, at his home in McComb City, Miss., December 18, aged 37.

LEWIS D. MARCUM, M.D., Medical College of Ohio, Cincinnati, 1888, at his home in Portsmouth, Ohio, December 16.

CHARLES C. CUNDALL, M.D., New York University, at his residence in Fair Haven, Mass., December 16, aged 66.

WILLIAM F. FARRELL, M.D., New York University, 1886, at his home in New York City, December 23, aged 42.

EDGAR H. SUGG, M.D., New York University, 1889, of Snow Hill, N. C., December 9, from dropsy, aged 33.

JOHN A. SNEED, M.D., Tulane University, New Orleans, 1879, at Fairfield, Texas, December 16.

WALTER S. BUNN, M.D., Columbus Medical College, Columbus, Ohio, 1884, at Lawrence, Kas.

Books and Pamphlets.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

BOOKS.

HAND ATLAS OF HUMAN ANATOMY. By Werner Spalteholz, Extraordinary Professor of Anatomy in the University and Custodian of the Anatomical Museum at Leipzig, With the Advice of Wilhelm His, Professor of Anatomy in the University of Leipzig. Translated from the Third German Edition by Lewellys F. Barker, Professor of Anatomy in the University of Chicago. With a Preface by Franklin P. Mall, Professor of Anatomy in the Johns Hopkins University at Baltimore. Vol. I. Bones, Joints, Ligaments. Paper; pp. 235. Price, $3.50. Leipzig: S. Hirzel. New York: G. E. Stechert. 1900.

OBSTETRICS. A Manual for Students and Practitioners. By David James Evans, M. D., Lecturer on Obstetrics and Diseases of Infancy, McGill University. Series Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York. Illustrated with 149 Engravings. Cloth; pp. 430. Price, $1.75. Philadelphia and New York: Lea Brothers & Co.

MALARIA ACCORDING TO THE NEW RESEARCHES. By Professor Angelo Celli, Director of the Institute of Hygiene, University of Rome. Translated from the Second Italian Edition by John Joseph Eyre, M.R.C.P., L.R.C.S., Ire., D.P.H., Cambridge. With an introduction by Dr. Patrick Manson, Medical Adviser to the Colonial Office. With Maps and Illustrations. Cloth; pp. 275. Price, $3.00. New York and Bombay: Longmans, Green & Co. 1900.

DISINFECTION AND DISINFECTANTS. A Treatise upon the Best Known Disinfectants, Their Use in the Destruction of Disease Germs, with Special Instruction for Their Application, in the Commonly Recognized Infectious and Contagious Diseases. By H. M. Bracken, M.D., Professor of Materia Medica and Therapeutics, University of Minnesota. Cloth; pp. 85. Price, $1.00. Chicago: Trade Periodical Co.

THE CARE OF THE CONSUMPTIVE. A Consideration of the Scientific Use of Natural Therapeutic Agencies in the Prevention and Cure of Consumption: Together with a Chapter on Colorado as a Resort for Invalids. By Charles Fox Gardiner, M.D., Non-Resident Fellow of the New York Academy of Medicine. Cloth; pp. 182. Price, $1.25. New York and London: G. P. Putnam's Sons. 1900.

A PRACTICAL TREATISE ON MEDICAL DIAGNOSIS FOR STUDENTS AND PHYSICIANS. By John H. Musser, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Fourth Edition, Revised and Enlarged. Illustrated with 250 Wood-cuts and 49 Colored Plates. Cloth; pp. 1105. Price, $6.00. Philadelphia and New York: Lea Brothers & Co. 1900.

TEXT-BOOK OF PHYSIOLOGY. Edited by E. A. Schäfer, LL.D., F.R.S., Professor of Physiology, University of Edinburgh. Vol. II. Cloth; pp. 1365. Price, $10.00. Edinburgh and London: Young J. Pentland. New York: MacMillan Co. 1900.

TERAPIA DELLE MALATTIE DEL L'INFANZIA ad uso di Medici e Studenti del Dott. Prof. Cesare Gattanco. Libero docente di Clinical Pediatrica alla R. Universita di Parma. Cloth; pp. 507. Milano: Ulrico Hoepli. 1901.

PROCEEDINGS OF THE KANSAS MEDICAL SOCIETY. Thirty-fourth Annual Meeting, Topeka, Kan., Wednesday, Thursday and Friday, May 2, 3 and 4, 1900. Cloth; pp. 226. Topeka, Kan.: A. D. Bauer Printing Co. 1900.

THE AUSTRALASIAN MEDICAL DIRECTORY AND HANDBOOK. Edited and Compiled by Ludwig Bruck. Fifth edition. Corrected up to August, 1900. Cloth; pp. 221. Sydney: L. Bruck. London: Bailliere, Tindall & Cox. 1900.

ETHICAL MARRIAGE. A Discussion of the Relations of Sex, from the Standpoint of Social Duty. By Delos F. Wilcox, Ph.D. Cloth; pp. 231. Price, $1.25. Ann Arbor, Mich.: Wood-Allen Publishing Company.

THE CURIOUS CASE OF GEN. DELANEY SMYTHE. By W. H. Gardner, M.D. Cloth; pp. 204. London, New York and Montreal: The Abbey Press.

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION. Thirty-second Annual Session held at Waco, Texas, April 24, 25, 26 and 27, 1900. Cloth; pp. 400. Austin, Texas: Von Boeckmann, Schutze & Co. 1900.

REPORT OF THE COMMISSIONER OF EDUCATION FOR THE YEAR 1898-99. Vol. I. Cloth; pp. 1248. Washington: Government Printing Office. 1900.

THE PRACTICE OF MEDICINE. A Text-Book for Practitioners and Students, with Special Reference to Diagnosis and Treatment. By James Tyson, M.D., Professor of Medicine in the University of Pennsylvania and Physician to the Hospital of the University. Second Edition Thoroughly Revised and in Parts. Rewritten. With 127 Illustrations, including Colored Plates. Cloth. Pp. 1222. Price, $5.50. Philadelphia: P. Blakiston's Son & Co. 1900.

THERAPEUTICS: ITS PRINCIPLES AND PRACTICE. By Horatio C. Wood, M.D., LL.D. (Lafayette-Yale), Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System, in the University of Pennsylvania. Eleventh Edition. Remodeled and in Greater Part Rewritten. By Horatio C. Wood, and Horatio C. Wood, Jr., M.D., Demonstrator of Pharmacodynamics in the University of Pennsylvania. Cloth. Pp. 850. Price, $5.00. Philadelphia and London: J. B. Lippincott Co. 1900.

THE MEDICAL EXAMINATION FOR LIFE INSURANCE AND ITS ASSOCIATED CLINICAL METHODS, with Chapters on the Insurance of Substandard Lives and Accident Insurance. By Charles Lyman Greene, M.D., St. Paul, Clinical Professor of Medicine and Physical Diagnosis in the University of Minnesota. With 99 Illustrations. Cloth. Pp. 426. Price, $4.00. Philadelphia: P. Blakiston's Son & Co. 1900.

QUIZ—COMPENDS. No. 16. A COMPEND OF DISEASES OF THE SKIN. By Jay F. Schamberg, A.B., M.D., Professor of Diseases of the Skin, Philadelphia Polyclinic and College for Graduates in Medicine. Second Edition, Revised and Enlarged. With 105 Illustrations. Cloth. Pp. 291. Price, $0.80. Philadelphia: P. Blakiston's Son & Co. 1900.

PROCEEDINGS OF THE EIGHTH ANNUAL MEETING OF THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, Held at Kansas City, Missouri, September 27, 28 and 29, 1900. Cloth. Pp. 376. Columbus, Ohio: Berlin Printing Co. 1900.

THE TREATMENT OF FRACTURES. By W. L. Estes, A.M., M.D., Director and Physician and Surgeon-in-Chief of St. Luke's Hospital, South Bethlehem, Pa. Cloth. Pp. 216. Price, $2.00. New York: International Journal of Surgery Co.

DISEASES OF THE NERVOUS SYSTEM. A Text-book for Students and Practitioners of Medicine. By H. Oppenheim, M.D., Professor at the University at Berlin. Authorized Translation by Edward E. Mayer, A.M., M.D., Pittsburg, Pa. First American from the Second Revised and Enlarged German Edition. With 293 Illustrations. Cloth. Pp. 900. Price, $5.00. Philadelphia and London: J. B. Lippincott Co. 1900.

THOMAS SYDENHAM. By Joseph Frank Payne, M.D., Oxon. Fellow and Harveian Librarian of the Royal College of Physicians. Cloth. Pp. 264. Price, $1.25. New York: Longmans, Green & Co. 1900.

TRANSACTIONS OF THE SECOND ANNUAL SESSION OF THE TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA, Held at The Charleston Hotel, Charleston, S. C., February 20, 21 and 22, 1900. Cloth. Pp. 315. Richmond, Va.: Williams Printing Co. 1900.

PROCEEDINGS OF THE NEBRASKA STATE MEDICAL SOCIETY. Thirty-second Annual Session, 1900. Cloth. Pp. 386. Published by the Society.

APPENDICITIS AND ITS SURGICAL TREATMENT. With a Report of One Hundred and Eighty-five Cases. By Herman Mynter, M.D. (Copenhagen), Professor of Clinical Surgery in University of Buffalo, Buffalo, N. Y. Third Revised Edition. Cloth. Pp. 231. Price, $2.00. Philadelphia: J. B. Lippincott Co. 1900.

SEXUAL DEBILITY IN MAN. By F. R. Sturgis, M.D., Formerly Clinical Professor of Venereal Diseases in the Medical Department of the University of the City of New York. Cloth. Pp. 432. Price, $3.00. New York: E. B. Treat & Co. 1900.

ORTHOPEDIC SURGERY. A HANDBOOK. By Charles Bell Kettley, F.R.C.S., Surgeon to the West London Hospital. Cloth. Pp. 539. Price, $5.50 net. London: Smith, Elder & Co. 1900.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY OF WISCONSIN, For the Year 1900. Constitution and By-laws and List of Members. Cloth. Pp. 480. Madison, Wis. M. J. Cantwell. 1900.

PAMPHLETS.

A NEW NASAL SPLINT. RETINITIS ALBUMINURICA WITH REPORT OF CASES. By Francis W. Alter, Toledo, Ohio. Reprints.

CEREBRAL ABSCESS FOLLOWING CHRONIC OTITIS MEDIA PURULENTA—OPERATION—RECOVERY. By William H. Dudley, M.D., Easton, Pa.

A PAPER ON ENGLISH SPELLING. By George D. Broomell. Paper; pp. 27. Price, $0.10. Chicago: Ben Franklin Company. 1900.

IRITIS. By J. H. McCassy, M.A., M.D., Dayton, Ohio. Reprinted from Medical News.

MALADMINISTRATION OF PUBLIC MEDICAL AFFAIRS IN THE STATE OF TEXAS. By H. A. West, M.D., Galveston, Texas. Reprinted from Texas Medical Journal.

MEDICAL EDUCATION. THE DEEP FASCIA. By Dr. Edmund W. Holmes. Reprints.

PROCEEDINGS AND ADDRESSES OF THE FOURTH GENERAL CONFERENCE OF THE HEALTH OFFICERS IN MICHIGAN, Grand Rapids, Mich., Oct. 26 and 27, 1899. Paper; pp. 181. Lansing, Mich.: Wynkoop, Hallenbeck, Crawford Co.

REPORT OF A CASE OF NEPHRECTOMY FOR PYONEPHROSIS DUE TO IMPACTION OF A STONE IN THE BLADDER. REPORT OF TWO CASES OF EPITHELIOMA OF THE VULVA. By Charles P. Noble, M.D., Philadelphia. Reprints.

REPORT OF THE COMMITTEE ON A STATE BOARD OF HEALTH, Texas State Medical Association, Waco, Texas, April 26, 1900. Reprinted from Texas Medical Journal and Transactions of Texas Medical Association.

ROENTGEN RAYS IN THE TREATMENT OF SKIN DISEASES AND FOR THE REMOVAL OF HAIR. THE PRESENT TREATMENT OF SYPHILIS. By Wm. Allen Pusey, A.M., M.D., Chicago. Reprints.

SCARLET FEVER. (Scarlatina.) Its Prevention, Restriction and Suppression. Issued by the Illinois State Board of Health, 1900. Paper; pp. 18 Springfield, Ill.: Phillips Bros. 1900.

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SUPERHEATED DRY AIR IN THE TREATMENT OF RHEUMATIC AND ALLIED AFFECTIONS. By Thomas E. Satterthwaite, M.D., New York City. Reprinted from Medical Review of Reviews.

THE APPLICATION OF HEAT IN ANTICIPATION OF SURGICAL SHOCK AS A PROPHYLACTIC MEASURE. HEMOTHORAX FROM STAB-WOUND OF AN INTERCOSTAL ARTERY—OPERATION—RECOVERY. A CONTRIBUTION TO THE STUDY OF ANASTOMOSIS OF THE HOLLOW VISCERA—A MODIFIED MURPHY BUTTON. By John S. Miller, A.M., M.D., Philadelphia. Reprints.

THE MATERIA MEDICA OF PICHI. By Noah E. Aronstam, M.D., Ph.G., Detroit, Mich. Reprinted from Physician and Surgeon.

THE NEED OF HOSPITALS AND TRAINING SCHOOLS FOR COLORED PEOPLE OF THE SOUTH. By Daniel H. Williams, M.D., Chicago. Reprinted from National Hospital Record.

THE PHYSICIAN'S INFLUENCE IN RE VACATION SCHOOLS. By Helen C. Putnam, A.B., M.D., Providence, R. I. Reprinted from Bulletin of American Academy of Medicine.

THE PREVENTION OF POST-OPERATIVE HERNIA. By C. U. Collins, M.D., Peoria, Ill. Reprinted from Peoria Medical Journal.

THE PUBLIC HEALTH AND THE STATE'S DUTY TO PROTECT IT. By M. M. Smith, M.D., Austin, Texas. Reprinted from Texas Medical Journal.

TENTH ANNUAL REPORT OF THE EYE, EAR, NOSE AND THROAT HOSPITAL OF NEW ORLEANS, LA. Jan. 1, 1899 to Dec. 31, 1899. Paper: pp. 54. New Orleans: L. Graham & Son. 1900.

THE USE OF THERMOL IN TYPHOID FEVER. By George B. Miller, M.D., Philadelphia. Reprinted from Philadelphia Medical Journal.

ABSTRACT ON THE REPORT ON THE ORIGIN AND SPREAD OF TYPHOID FEVER IN U. S. MILITARY CAMPS DURING THE SPANISH WAR OF 1898. By Walter Reed, Major and Assistant Surgeon, U. S. Army; Victor C. Vaughan, Major and Division Surgeon, U. S. V.; and Edward O. Shakespeare, Major and Brigade Surgeon, U. S. V. Paper. Pp. 239. Washington: Government Printing Office. 1900.

CLINICAL REPORT ON A PIN IN THE VERMIFORM APPENDIX SIMULATING TUBO-OVARIAN ABSCESS. THE PREVENTION OF PUERPERAL SEPTICEMIA. By H. G. Wetherill, Denver, Colo. Reprints.

INJURIES OF THE EYELIDS AND EYEBALLS. By L. Webster Fox, A.M., M.D., Philadelphia, Pa. Reprinted from International Clinics.

LOCOMOTOR ATAXIA. By Hugh T. Patrick, M.D., Chicago. Reprinted from International Clinics.

REPORT OF THE RESULTS OF THE EXECUTION OF THE LAW, "Regulating the Practice of Medicine and Surgery in the State," by the Medical Examining Boards, from its Passage, April 18, 1895, to December 15, 1899. Paper. Pp. 25. Dover, Del.: The Index Print.

THE GOOD NURSE. By James H. McBride, M.D., Los Angeles, Cal. Reprinted from Chicago Medical Recorder.

TRANSACTIONS OF THE ELEVENTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF WASHINGTON. Held at Spokane, May 8 and 9, 1900. Paper. Pp. 180. Spokane, Wash.: Shaw and Borden Co. 1900.

TRANSACTIONS OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, at its Thirty-third Annual Session held at Meridian, April 18 and 19, and May 16, 17 and 18, 1900, with the Roll of Members and Reports on Medical Topics. Published by the Association. Paper. Pp. 146. Biloxi, Miss.: Biloxi Daily Herald. 1900.

WHAT THE LAW REQUIRES OF THE SURGEON. By Dudley S. Reynolds, A.M., M.D., Louisville, Ky. Reprinted from N. Y. Med. Jour.

A CATARACT KNIFE OF EXCELLENT SHAPE AND PROPORTION DEVISED A CENTURY AND A HALF AGO, BY DR. THOMAS YOUNG, OF EDINBURGH, AND THE KNIVES WHICH PRECEDED IT. By Alvin A. Hubbell, M.D., Buffalo, N. Y. Reprinted from the Ophthalmic Record.

IS INTERNAL ANTISEPSIS POSSIBLE. By Thomas E. Satterthwaite, M.D., New York. Reprinted from Post-Graduate.

LOCOMOTOR ATAXIA. Clinical Lecture Delivered at the Chicago Policlinic. By Hugh T. Patrick, M.D., Chicago. Reprinted from International Clinics.

PUTRID GASTROENTERITIS. By S. Stevens, M.D., Dowagiac, Mich. Reprinted from Five Plexus.

ROENTGEN RAYS IN THE TREATMENT OF SKIN DISEASES AND FOR THE REMOVAL OF HAIR. By William Allen Pusey, A.M., M.D., Chicago. Reprinted from Chicago Medical Recorder.

FORMALDEHYDE DISINFECTION AS PERFORMED BY THE CHICAGO HEALTH DEPARTMENT. By Charles W. Behm, M.D., Chief Medical Officer in Charge of Disinfection. September, 1900.

GASTRIC HEMORRHAGE. GASTRIC ULCER: NON-PERFORATING HEMORRHAGE. By William L. Rodman, M.D., Philadelphia. Reprinted from Philadelphia Medical Journal.

METHODS IN THE DIAGNOSIS OF DISEASES OF THE STOMACH. By Charles D. Aaron, M.D., Detroit. Reprinted from Medical Standard.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. November, 1900. Paper. Pp. 20. Published by the Society. 1900.

PHYSIOLOGY OF SEXUALISM. By N. E. Aronstam, M.D., Ph.G., Detroit. Reprinted from Medical Age.

REPORT OF THE SURGEON-GENERAL, U. S. NAVY, Chief of the Bureau of Medicine and Surgery, to the Secretary of the Navy. 1900. Paper. Pp. 267. Washington: Government Printing Office. 1900.

SEVEN BRIEF MEDICAL PAPERS. FLOATING SPLEEN. FATTY CIRRHOSIS OF THE LIVER. AMYLOID DEGENERATION OF THE KIDNEY. TYPHOID FEVER WITH COMPLICATIONS. DIAGNOSIS IN THE LIGHT OF NECROPSY. EMPYEMA. INFECTIOUS DISEASES. By Stephen Smith Burt, A.M., M.D., New York. Reprinted from the Post-Graduate.

THE TREATMENT OF NOMA. By G. M. West, M.D., Eufaula, I. T. Reprinted from the Therapeutic Gazette.

TINEA VERSICOLOR. By John Bartlett, M.D., Chicago. Reprinted from Clinical Review.

TRADE PAMPHLETS.

DANIEL'S CONCENTRATED TINCTURE PASSIFLORA INCARNATA. By John B. Daniel, Atlanta, Ga.

ANTIPYRINE SUPPOSITORIES. BETA-EUCAIN. BETANAPHTHOL-BISMUTH. PHENOL-BISMUTH. TRIBROMPHENOL-BISMUTH. COLLARGOLUM AND UNGUENTUM CREDE. CREOSOTAL AND DUOTAL. FORMALIN DISINFECTION. HELTHIN. SCHERING'S GLYCERO-PHOSPHATES. STIEFEL'S MEDICINAL SOAPS. UROTROPIN. By Schering & Glatz, New York.

DIABETES MELLITUS. Its Detection and Successful Treatment. By Heinrich Stern, Ph.D., M.D., New York. Chas. Roome Parmele Co., New York.

THE WALTER BAKER SANITARIUM. Paper. Boston, Mass.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Assisted by H. R. M. Landis, M.D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Volume IV. December, 1900. Diseases of Digestive Tract and Allied Organs, the Liver, Pancreas, and Peritoneum—Genito-Urinary Diseases and Syphilis—Fractures, Dislocations, Amputations, Surgery of the Extremities, and Orthopedics—Diseases of the Kidneys—Physiology—Hygiene—Practical Therapeutic Referendum. Cloth. Pp. 428. Price, $2.50. Philadelphia and New York: Lea Brothers & Co. 1900.

STUDENTS' EDITION. A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS, with Special Reference to the Clinical Application of Drugs. By John V. Shoemaker, M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia. Fifth Edition. Thoroughly Revised. Cloth. Pp. 770. $4.00 net. Philadelphia, New York and Chicago: F. A. Davis Co. 1900.

ANOMALIES OF REFRACTION AND OF THE MUSCLES OF THE EYE. By Flavel B. Tiffany, A.M., M.D., Professor of Ophthalmology and Otology of the University Medical College of Kansas City, Mo. Author's Fourth Edition. Cloth. Pp. 307. Price, $2.40. Kansas City, Mo.: Hudson-Kimberly Publishing Co. 1900.

THE SURGICAL TREATMENT OF CONGENITAL AND PATHOLOGIC DISFIGUREMENTS OF THE FACE. Abstract of the Mutter Lectures of the College of Physicians of Philadelphia, for 1900. By John B. Roberts, A.M., M.D., Professor of Surgery in the Philadelphia Polyclinic. Cloth. Pp. 53. Price, $1.20. Philadelphia: Philadelphia Medical Publishing Co. 1900.

AN ESSAY ON THE REDUCTION OF OBESITY. With Special Reference to the Use of Granular Effervescing Salts of Vichy and Kissingen. By William T. Cathell, A.M., M.D., Baltimore. John Wyeth & Bro., Philadelphia.

CATALOGUE OF AUTOGRAPH COLLECTIONS. The Property of William Ebbitt Mitchell, 251 West 43rd St., New York. Now offered for sale.

MICROSCOPICAL REPRODUCTIONS OF THE BLOOD AND BACTERIA. Directions for Preparing Specimens for Diagnostic Purposes, etc. Reed and Carnrick, Jersey City, N. J.

Miscellany.

Toxicity of Expired Air.—Experiments at the Hygienic Institute at Prague seemed to indicate that the air expelled from the lungs of guinea-pigs and dogs contained some toxic substance, in addition to the carbon dioxid, as the animals rapidly succumbed to its action. But further research demonstrated that the toxic action was due to the ammonia in the putrefying excreta in the cages. Formanek concludes from these experiments that the syncope and discomfort experienced in insufficiently ventilated or crowded rooms, are not due to any special toxins expired but are merely reflex disturbances in sensitive individuals, caused by the heat or disgust at the odors emanating from the crowd. Ammonia can be incriminated to a slight extent and carbon dioxid still less.—*Arch f. Hyg.* xxxviii, 1.

Glycosuria Consecutive to Extirpation of Pituitary Gland.—Extensive experimental research on dogs has demonstrated that partial or total resection of the cerebral hypophysis produces besides the inevitable cachexia, a pronounced and persistent glycosuria, accompanied by polyuria. Caselli observes in his preliminary communication to the *Rivista Sperim. di Freniatria* xxvi, 1, that this result agrees with the clinical observation that glycosuria is frequent in case of a tumor in the pituitary gland with or without acromegaly.

Eucain Versus Cocain for Medullary Narcosis.—F. Legueu, professor agrégé at Paris, used cocain exclusively in forty-eight operations performed under intraspinal anesthesia, and then substituted eucain in the succeeding nine. His experience with the latter was very favorable. He has long employed it for local anesthesia in preference to cocain, on account of its lesser toxicity and the possibility of effectively sterilizing it by the usual methods. Whether eucain or cocain, he always uses a 2 per cent. solution. The average dose of cocain was 2 cgm., i.e., 1 c.c. of a 2 per cent. solution, but in a few cases he increased this amount to 3 cgm. and in others 1 cgm. proved sufficient. Dr. F. Engelmann reports an unfortunate experience with eucain B. in his own person, in a communication to the *Muench. Méd. Woch.* of October 30. He had 1 cgm. of eucain injected into the lumbar spinal cavity by a colleague by the usual technique; no anesthesia was induced, but symptoms of intoxication appeared in a few hours, severe sacral pains, headache, nausea and vomiting, eight to ten chills and slight temperature. The headache was unbearable at first, and persisted severe for eight to ten days, although not interfering with his duties. He found no relief from antineuralgics, but the headache ceased in the dorsal decubitus.

Societies.

Medical Association of Nevada, Reno, Jan. 7, 1901.
Pan-American Medical Congress, Havana, Cuba, Feb. 4, 1901.
Tri-State Medical Association of the Carolinas and Virginia, Richmond, Va., Feb. 26, 1901.

THE SALT LAKE (Utah) MEDICAL SOCIETY, at its meeting, December 10, elected Dr. Ira A. E. Lyons, president; Dr. Alexander C. Ewing, vice-president; Dr. Murray R. Stewart, secretary, and Dr. Augustus C. Behle, treasurer.

THE COLUMBUS (Ohio) ACADEMY OF MEDICINE held its annual meeting, December 17, at which the following officers were elected: Dr. James C. Lawrence, president; Dr. Hugh Hendrixson, vice-president; Dr. John L. Gordon, secretary, and Dr. Francis W. Blake, treasurer.

THE JEFFERSON COUNTY (Ala.) MEDICAL SOCIETY held its last meeting for the year, at Birmingham, December 17, at which the following officers were elected: Dr. W. E. B. Davis, president; Dr. Edward P. Riggs, censor, and Dr. James M. Mason, health officer.

THE BUTLER COUNTY (Ohio) MEDICAL SOCIETY, at its meeting at Hamilton, December 12, elected Dr. August Schumacher, Hamilton, president; Dr. James E. Torrence, Oxford, vice-president; Dr. Edward H. French, Hamilton, secretary, and Dr. Francis M. Fitton, Hamilton, treasurer.

THE CENTRAL DISTRICT MEDICAL ASSOCIATION OF IOWA held its twenty-sixth semi-annual meeting at Boone, December 18, and elected Dr. David N. De Tar, Boone, president; Dr. Josiah D. McVey, Lake City, vice-president, and Dr. George H. Stranger, Boone, secretary and treasurer.

THE NEW YORK ACADEMY OF MEDICINE held its annual election of officers, December 20, with the following result: Dr. Robert F. Weir, president; Dr. Charles M. Dana, vice-president; Dr. John H. Huddleston, corrsponding secretary, and Dr. Louis F. Bishop, recording secretary.

THE SOUTH TEXAS MEDICAL ASSOCIATION held its semi-annual meeting at Houston and elected Dr. Robert W. Knox, Houston, president; Drs. Walter Shropshire of Yoakum, and George W. Emory of Anderson, vice-presidents, and Dr. D. Stuart Wier, Houston, secretary and treasurer.

THE LORAIN COUNTY (Ohio) MEDICAL SOCIETY, at its meeting held December 18, elected Dr. William C. Bunce, Oberlin, president; Dr. Ewan Cameron, Lorain, vice-president; Dr. A. M. Webster, Lorain, secretary, and Dr. Frank Young, Lorain, treasurer and librarian.

THE HAWAIIAN MEDICAL ASSOCIATION, at a recent meeting, changed its name to "The Hawaiian Territorial Medical Society," and elected the following officers: Dr. W. E. Taylor, president; Dr. H. C. Sloggett, vice-president, and Dr. A. G. Hodgins, secretary and treasurer.

THE MONTGOMERY COUNTY (Ohio) MEDICAL SOCIETY met for its annual session at Dayton, December 7, and elected Dr. John S. Beck, president; Dr. Francis C. Gray, vice-president; Dr. Horace Bonner, secretary; Dr. David C. Lichilter, treasurer, and Dr. Duff W. Greene, censor, all of Dayton.

THE MEDICAL AND SURGICAL SOCIETY OF MONTGOMERY COUNTY (Ala.) met at Montgomery, December 15, and elected Dr. Robert Goldthwaite, president; Dr. Frank H. M. McConnico, vice-president; Dr. Charles T. Pallard, secretary; Dr. Shirley Bragg, treasurer and county health officer, and Dr. Glenn Andrews, censor.

THE BERRIEN COUNTY (Mich.) MEDICAL SOCIETY met for its third annual session at Benton Harbor, December 13, and elected Dr. Henry V. Fulton, Benton Harbor, president; Dr. Robert Henderson, Buchanan, vice-president; Dr. Wakeman Ryno, Benton Harbor, secretary, and Dr. Hattie G. Schwendener, St. Joseph, treasurer.

THE NORTHWEST ARKANSAS MEDICAL SOCIETY convened at Siloam Springs, December 11, and elected Dr. Thomas W. Blackburn, Boonsboro, president, and Dr. Joseph T. Ch[illegible] Siloam Springs, secretary. Prairie Grove was selected as the place for the next semi-annual meeting in June, 1901.

THE TENNESSEE VALLEY MEDICAL SOCIETY met for [illegible] tion at Huntsville, Ala., December 19, and elected Dr. [illegible] E. Baldridge, Huntsville, president; Drs. Thaddeus A. Casey, Albertville, and F. F. Pettey, Decatur, vice-presidents; Dr. Thomas E. Dryer, Huntsville, secretary, and Dr. Edgar Rand, Leighton, treasurer.

THE NORTHWESTERN OHIO MEDICAL ASSOCIATION, held its annual meeting at Toledo, December 14. The following officers were elected: Dr. John A. Wilkins, Delta, president; Drs. Harbon B. Gibbon, Tiffin, and Manford M. Hixson, Continental, vice-presidents; Drs. Joseph P. Baker, Findlay, secretary, and Theodore M. Gehrett, treasurer, were re-elected.

THE NORTH TEXAS MEDICAL ASSOCIATION, which held its semi-annual session at Sherman, December 11, 12 and 13, decided to hold its next meeting in Paris. Dr. Robert F. Miller, Sherman, was elected president; Dr. Jesse B. Shelmire, Dallas, vice-president; Dr. Stephen A. D. Moore, Van Alstyne, secretary, and Dr. Carey A. Gray, Bonham, treasurer.

THE SOMERVILLE (Mass.) MEDICAL SOCIETY, at its annual meeting held December 13, voted to tender its co-operation to the board of health in the proposed medical inspection. The following officers were elected: Dr. George A. Miles, president; Dr. Frederick G. Smith, vice-president, and Dr. Arthur R. Perry, secretary and treasurer.

THE MORGAN COUNTY (Ill.) MEDICAL SOCIETY met at Jacksonville, December 13. The following officers were elected: Dr. John G. Franken, Chandlerville, president; Dr. Alonzo F. Burnam, Jacksonville, vice-president; Dr. E. F. Baker, Jacksonville, secretary; Dr. Edward Bowe, Jacksonville, treasurer, and Dr. William C. Cole, Jacksonville, librarian.

THE SEABOARD MEDICAL ASSOCIATION OF VIRGINIA AND NORTH CAROLINA, held its annual meeting at Weldon, N. C., December 14 and 15. Norfolk, Va., was selected as the next place of meeting. Dr. J. Emmett Sebrell, Courtland, Va., was elected president; Drs. H. Turner Bass, Tarboro, N. C., Emerson Land, Oceana, Va., Joel Crawford, Yale, Va., and Albert R. Anderson, Wilson, N. C., vice-presidents; Dr. Isreal Brown, Norfolk, Va., treasurer; Dr. John R. Bagby, Newport News, Va., secretary, and Dr. A. K. Taylor, Washington, N. C., orator.

THE SALT LAKE COUNTY (Utah) MEDICAL SOCIETY met at Salt Lake City, December 10, and discussed vaccination. The general consensus of opinion was that absolute immunity from smallpox, by vaccination, could be secured only by re-vaccination every time there was an epidemic. The following officers were then elected: Dr. Ira C. E. Lyons, president; Dr. Alexander C. Ewing, vice-president; Dr. Murray R. Stewart, secretary, and Dr. Archibald A. Kerr, treasurer.

THE CALHOUN COUNTY (Mich.) MEDICAL SOCIETY, at its annual meeting held December 18, at Battle Creek adopted a resolution that it should be considered a violation of medical ethics for a physician to allow his name to be published in connection with reports of accidents or cases treated. The following officers were elected: Dr. Leon M. Gillette, Battle Creek, president; Drs. George C. Hafford, Albion, and John C. Brown, Burlington, vice-presidents; Dr. William H. Haughey, Battle Creek, secretary; Dr. Richard M. Olin, Battle Creek, treasurer.

THE MAINE ACADEMY OF MEDICINE AND SCIENCE held its forty-second stated meeting at Portland, December 10, at which the following resolution was adopted: *Resolved*, That we, the members of the Maine Academy of Medicine and Science, recognizing the necessity of a public laboratory in this state, whereby contagious and infectious diseases can be studied and the public protected, do recommend and advise the establishment of such an institution and that legislation be enacted to that effect. *Resolved*, That this resolution be forwarded to the secretary of the State Board of Health, after being signed by our president and secretary. The election of officers resulted as follows: Dr. Samuel J. Bassford, Biddeford, president; Dr. Daniel Driscoll, Portland, recording secretary; Dr. Addison S. Thayer, Portland, corresponding secretary, and Dr. Herbert F. Twitchell, Portland, [illegible]

THE DETROIT MEDICAL SOCIETY held a "centenary meeting" December 19, at which a symposium on the medical progress of the nineteenth century was offered. Dr. Victor C. Vaughan, Ann Arbor, who spoke on the progress of medicine, acknowl-

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edged the great advances made that have banished the fear of smallpox, reduced the death-rate in typhoid fever from 30 to 7 per cent., discovered the causes and partial cures for tuberculosis, anthrax, cholera and the like. He said that isolation and antiseptics had more to do with reducing the danger from communicable diseases than all other agencies. He predicted that the day is coming when science will be so absolute that no man will pollute the water we drink, the food we eat, the air we breathe and the floors and pavements on which we live and walk, and that disease in large part will be utterly stamped out. Dr. Nathaniel W. Webber spoke of "The Old Doctors of Detroit and Michigan," and Dr. Henry O. Walker discussed the progress of surgery, accrediting to American surgeons the greatest and most wonderful advances of the century. Frank T. Lodge read a paper entitled "A Half Century of Medical Jurisprudence," in which he condemned the existing practice of buying expert witnesses in cases at law. He suggested possible remedies: That experts be named by the court in every case; that one be selected by each party to the case and a third by the court; that a standing commission be appointed, from which experts could be drawn; that there be an auxiliary panel of experts, a part of the jurors to be drawn from them; that there be an abolition of hypothetical interrogations; that there be a severe restriction in the way of examinations for eligibility as experts and that the payment of experts be made out of the public treasury.

THIRD PAN-AMERICAN MEDICAL CONGRESS.

SECTION OF OBSTETRICS.

Dr. E. Gustave Zinke, 13 Garfield Place, Cincinnati, Ohio, Secretary. Titles and authors of papers received up to date:

1. The Toxicity of the Urine in Pregnancy and Its Relation to Puerperal Convulsions; by Dr. John Milton Duff, Pittsburg, Pa. 2. Face Presentation; by Dr. J. A. Lyons, Chicago. 3. The Management of a Myomatous Pregnant Uterus; by Dr. W. H. Wathen, Louisville, Ky. 4. Experimental Investigation on Puerperal Sepsis; by Dr. F. Gaertner, Saginaw, Mich. 5. The Simultaneous Occurrence of Extra- and Intra-Uterine Pregnancy and a Tabulated Record of 62 Cases Collected from 1708-1901; by Dr. E. Gustav Zinke, Cincinnati, Ohio. 6. Cholemia and Hemorrhage; by Dr. David Tod Gilliam, Columbus, Ohio. 7. Renal Insufficiency in Relation to Women; by Dr. Jas. T. Jelks, Hot Springs, Ark. 8. Clinical Consideration Relating to Cancer of the Uterus; by Dr. A. T. Currier, New York City. 9. The Medication and Treatment of Uterine Fibroids; by Dr. W. B. Chase, New York City.

Philadelphia College of Physicians.

Meeting November 20, 1900.

DR. S. D. RISLEY in the chair.

ORBITAL ABSCESS.

DR. S. D. RISLEY exhibited a case of abscess of the orbit following injury which was associated with an opening in the ethmoid cells caused by a blow from a piece of metal on the nasal aspect of the upper eye-lid. Cold compresses were applied, but later fluctuation occurred, and after a deep incision was made a large amount of pus was evacuated. The cavity was syringed with peroxid of hydrogen and saturated solution of boracic acid. It was found that the fluid passed freely into the nostrils.

PAPILLOMA OF CARUNCLE.

DRS. W. C. POSEY and E. A. SHUMWAY had only been able to find five cases of this condition that had been accurately described microscopically, and this case was the sixth. The patient was a man aged 60 years, who exhibited a mulberry growth attached by a pedicle to the right caruncle, and two similar growths on the palpebral conjunctiva near the lid margin. The growths were incised and the loss of tissue replaced by a flap from the forehead. Microscopic examination showed a pedicle of connective tissue attached to the caruncle, from which proceeded numerous branches covered with a thick mantel of epithelium. The axial connective tissue was embryonal in character, and contained thin blood-vessel walls. There was a marked increase of lymphoid cells, and numerous goblet cells in the epithelium covering the caruncle and the mantels covering the tumor. There was no extension of the growth beneath the surface of the caruncle.

DR. GEORGE E. DE SCHWEINITZ referred to a case of papilloma springing from the plica semilunaris which he had removed last April.

DR. C. A. VEASEY had several years ago removed a growth which he thought was a papilloma, but which proved to be a sarcoma.

INTRAOCULAR METALLIC BODIES.

DR. GEORGE E. DE SCHWEINITZ described two cases of intraocular metallic foreign bodies which had been localized with the X-rays according to Sweet's method. In one case the body was firmly imbedded in a mass of cicatricial tissue behind the ciliary body, where it had been for ten months. It could not be removed with a magnet and the eyeball was removed as sympathetic inflammation had already set in. In the second case the foreign body was of unusual size and was easily removed twenty-four hours after the accident. The eyeball was collapsed; it was filled with normal saline solution and closed with catgut sutures and there was an uninterrupted recovery. He dwelt on the uselessness of attempting to remove a foreign body by a magnet after it had become imbedded and was of long standing.

INFLUENZA AND GLAUCOMA.

The speaker also read a paper on the etiological relationship of epidemic influenza to chronic glaucoma. Some writers had stated that glaucoma was more prevalent after epidemics of influenza. He related a case of retrobulbar neuritis caused by this disease in which he had observed the formation of a cup closely simulating glaucoma, and this condition might account in some cases for this supposed relationship.

DR. M. H. FENTON had seen a case diagnosed influenza, and on the sixth day the eye was of stony hardness, while the other eye exhibited chronic glaucoma. He believed the superintoxication in influenza induced glaucoma in eyes predisposed to the disease.

CONJUNCTIVAL HEMORRHAGE.

DR. HOWARD F. HANSELL reported a case of hemorrhage from the conjunctiva in an infant. The child at birth was frail, and for several days after birth there had been a purulent discharge from the conjunctiva of both lids. Two weeks later bleeding from the conjunctiva commenced and continued five days. The hemorrhage came from the entire conjunctival surface and continued day and night. The blood count showed 5,400,000 red and 5600 white corpuscles; the hemoglobin was not estimated. Death ensued at the fifth week.

DR. DE SCHWEINITZ recalled two cases of a similar nature, one of which he had reported.

Cincinnati Academy of Medicine.

Regular Meeting, Nov. 25, 1900.

GALL-STONES.

DR. RUFUS B. HALL presented some gall-stones, removed from a woman 37 years old, the mother of thirteen children, the youngest being but 7 weeks old. Her present illness began suddenly five weeks ago with what was at first supposed to be an attack of gastralgia; in a day or two, however, she commenced to have severe chills every day or even oftener, followed by profuse and exhausting sweats. At this time there was noted an enlargement of the upper part of the right abdomen extending downward below the free border of the ribs some three or four inches. She entered the Presbyterian Hospital one week ago; at that time she was delirious, her pulse was between 150 and 160. Soon after her entry she was taken with a chill which sent her temperature to 105. The abdominal enlargement had increased to about the size of an adult head. Suspecting a suppurating gall-bladder or an abscess of the liver, he aspirated and drew off a large quantity of pus. This he knew to be from the gall-bladder, as during the aspiration he could feel the stones therein. Within twelve hours she had improved greatly and at the end of fifty hours she could answer questions intelligently. He then operated, removing something over 850 gall-stones.

DR. J. L. CLEVELAND narrated a case that had come under his observation a number of years ago. The patient had had an intermittent fever for a long time which could not be controlled by quinin or arsenic. There was no jaundice, no enlargement over the liver, no tenderness, only a gastro-intestinal catarrh that might have been present in any fever. The

gall-bladder could not be outlined. The patient went on from bad to worse, finally died, and on post-mortem examination the gall-bladder was found to be filled with stones.

FIBROCYSTIC TUMOR OF THE UTERUS.

DR. E. GUSTAVE ZINKE presented a specimen of fibrocystic tumor of the uterus that in some respects resembled a pregnancy. The physical characteristics of the tumor were those of a pregnant uterus, but the history of the case was of longer standing than nine months. Even on opening the abdomen the tumor at first sight greatly resembled a pregnant uterus. Tumor was removed and the woman has made an uneventful recovery. Dr. Zinke also presented a specimen of multilocular cyst of the ovary with a pedicle thirteen inches in length. There were papillomatous masses within, but he did not think there would be any recurrence on that account. Recovery uneventful.

DR. C. L. BONIFIELD presented a specimen of fibrocystic tumor of the uterus in which the uterus itself had participated in the cystic degeneration. In this case the cervix was much elongated, so much so that it protruded from the vulvar orifice. This specimen simply showed a more advanced stage of the disease than Dr. Zinke's tumor. Dr. Bonifield also presented a specimen of multilocular ovarian cyst with papillomatous ingrowths. This specimen was very much like that of Dr. Zinke's before it was opened.

LUNG WITH UPPER LOBE COLLAPSED.

DR. W. D. HAINES presented this specimen. Post-mortem examination was made some 18 to 20 hours after death; rigor mortis was absent; post-mortem staining was well marked, especially along the dorsal surfaces. Right kidney was enlarged and the kidney congested; the left kidney was normal. The liver was greatly enlarged. After the abdominal viscera had been removed there was noticed a marked bulging in the left hypochondriac region. On introducing the canula there escaped from five to six pints of mucopurulent fluid containing numerous flocculi. The pus-sac was in all probability tubercular. There was, as shown in the specimen, complete collapse of the upper lobe of the lung.

INTESTINAL OBSTRUCTION DUE TO INTUSSUSCEPTION.

DR. LOUIS E. COOK reported this case, a girl 7 years of age, well developed and nourished. He was called first on the morning of June 28, and found her vomiting and complaining of cramps in the right side of the abdomen. The attack was sudden, as she had gone to bed the night before perfectly well. Pain was so severe that palpation of the abdomen was impossible. There was no fever. Vomitus was chiefly of mucus. A provisional diagnosis of intestinal indigestion was made, and hot applications were ordered to the abdomen and calomel and soda internally. During the day the bowels were moved by large enemata. Vomiting almost continuous, accompanied by much retching. On June 29 she passed a very bad night, pain continuous, no sleep; vomiting persisted during the day. On June 30, pain somewhat diminished, so that for the first time an examination of the abdomen could be made. Small elongated mass could be detected in the right iliac region; abdomen flat. Rectal examination was negative. Diagnosis changed to intussusception and a high enema given, with, however, no result. On July 1 she passed a restless night, better, however, than the preceding, the vomiting ceasing for about six hours. At 7 in the morning vomiting began again, becoming bilious. An enema was given at a temperature of 105 degrees, with high pressure from a fountain syringe, the patient being in the knee-elbow position. About one and one-half gallons of water were used. Vomiting was incessant during the injection. After the enema she passed some small, soft fecal masses and a large amount of gas, the first since the beginning of her illness. Vomiting stopped until evening, and it was then very slight. Mass in iliac region had disappeared. On July 2 child passed a fairly good night; vomiting stopped; bowels moved once. During the day rectal alimentation of peptonized milk was begun. She began feeding by the mouth by the 4th, and on the 8th of the month was able to take solid food. The temperature throughout the attack was seldom more than 1 degree above the normal.

Omaha Medical Society.

Regular Meeting, Nov. 27, 1900.

LEUKEMIA.

DR. B. F. CRUMMER read a paper on this affection, and presented the subject. He was 32 years of age, of good family history. He was a man of good habits and denied any venereal history; he suffered with mild malaria in 1896, with nosebleed in 1898. During 1898 and 1899 he was very weak, had a rapid pulse and much dyspnea. He first came under observation Nov. 1, 1900. He was a basket-maker and went to the Missouri bottoms in May last to gather his material. In June he had to abandon his work and suffered with pain in the abdomen, anorexia, fever, night-sweats and loss of weight; his pulse was about 110, his temperature 101. There were mucous râles, and the inspiratory sounds were harsh; there was a soft, systolic murmur over the base. The spleen was much enlarged, notched, and reached downward to the crest of the ilium and one inch beyond the navel. The axillary, and inguinal glands were slightly enlarged; there was no tenderness of the tibia. He had been using Fowler's solution in doses of 15 or 16 drops for three or four weeks; he was now able to work a little; his temperature is still from 101 to 102 daily. There was an average of one white blood-cell to 12 or 15 red cells; hemoglobin was 45 per cent.; the myelocytes were in large proportion, about 12 per cent.; the bone-marrow was certainly involved, though the tibia was not tender. This patient was dangerously near the most grave proportions of the white and red blood-cells. The patient was doing well on the arsenic and the extract of bone-marrow. Another case, seen in 1892, showed the blood-cells in the proportion of 1 to 5 and the abdomen was entirely filled with the enlarged spleen; the patient lived two years. The Doctor had also treated a woman of 36 in 1896 who had marked pain and tenderness of the tibiæ; she had the lieno-myelogenous variety of leukemia, and improved under large doses of arsenic.

ICTERUS NEONATORUM.

DR. H. M. MCCLANAHAN read this paper. Jaundice in the neonati is frequently observed; usually passes away in a few days without injurious effects, and is rarely a symptom of serious import. Of these cases, there are two classes: one, with recovery, without untoward symptoms; the other, in which other symptoms of disease are shown or the patients fail in strength. The first class is usually called physiologic, benign, pseudo or hematic in origin; the other, is called hepatic in origin. The red blood-cells are rapidly reduced in number, hemoglobin is liberated, converted into biliary coloring matter and carried to the intestinal tract. If the infant is very feeble or the skin surface is chilled, this coloring matter is deposited in the skin.

Quincke's theory is that the ductus venosus remains pervious and the blood from the portal vein, laden with bile pigment, is carried into the general circulation. These infants are always unusually feeble. The other class, the fatal cases, are called pathologic, or malignant icterus. Among the causes are congenital defects, or absence of the bile-ducts. Dr. White reported 18 cases in which there was an absence of either the hepatic duct or the common duct, or the latter had become an impervious cord. Cases have also been seen at autopsy in which the cause was due to pressure upon the ducts by a neoplasm. Syphilitic hepatitis is also a cause of jaundice. Reliable authorities report cures of intense jaundice under antisyphilitic treatment. Jaundice is often associated with sepsis due to a phlebitis of the umbilical vein which has hepatitis. The practical side of the subject is that the physician shall be able to differentiate between the benign and the malignant cases: in the former there are no serious symptoms: the stools are not clay-colored, the urine does not stain the napkin, there is no fever, no loss of weight: in the latter the icterus gradually becomes more intense, the eyes and the mucous membrane of the mouth gradually become icteric, the urine is dark, often scanty, and the stools white or clay-colored; the liver is enlarged; the temperature is often subnormal. Of greatest importance, however, is the gradual loss of weight in spite of the fact that the child takes an abundance of food. Syphilitic jaundice is rare, though the

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liver is often affected by syphilis; the diagnosis must be made from the history of the mother; miscarriages and still-births strongly point to this cause; in this form the liver is enlarged from birth, whereas, in obstructive jaundice, it gradually enlarges during the course of the disease. Jaundice due to sepsis usually appears later and has with it fever, anorexia, twitchings, tonic contractions or convulsions, and gastro-intestinal trouble. In sepsis accompanied by icterus there is frequently hemorrhage from the navel or bowels.

DR. J. M. AITKIN presented a brain and gave the following very interesting history: The man, aged 50, came to him in May, 1899, after an attempt at suicide. He was under treatment two months for persistent pain in the vertex; he admitted an almost irresistible impulse to suicide; there were no delusions. He was a man of large business, neither used liquor, tobacco nor drugs. There was no history of prior sickness; he gave up his business and traveled, improved, came back and resumed business. Later the headache returned; on the 24th the suicidal impulse again overpowered him. He wrote a letter with regard to it, and sent out three messenger boys, each having 10 cents for morphin; it is supposed that he got about 7 or 8 grains. He took all the powders, closed the room tightly and turned on the gas. He was found the next morning. After vigorous efforts, he was restored. On Sunday he was rational, doing well, apparently recovering. He said there had been no business reverses, no trouble, merely a return of the awful headaches with the irresistible impulse to suicide. On the 25th preparation was made to send him to the asylum; on the 26th his temperature was 103, respiration was about normal; he became worse, and died on the morning of the 27th. An autopsy showed that death was due to hypostatic pneumonia, a late result of the gas poisoning. The brain showed the source of the headaches and the suicidal impulses; the dura was strongly adherent for 3 inches back of the fissure of Rolando; calcareous matter was present. There had been no brain hemorrhage; degeneration was shown in the region supplied by the middle cerebral artery; there had been no paralysis.

Chicago Society of Internal Medicine.

Nov. 27, 1900.

President Dr. John A. Robison in the chair.

ACQUIRED DEXTROCARDIA.

DR. HOMER M. THOMAS demonstrated a case of the above. A consideration of the general subject of heart displacement reveals two varieties—the congenital and acquired. Of acquired displacements, it is found that very considerable displacement of the apex-beat to the right may be due to retraction of the right lung from fibroid phthisis. Again, a very common cause is found in the development of pneumothorax. In cases of fibroid phthisis where dextrocardia exists, frequently the apex-beat is above the right nipple, and might be recognized by physical signs dependent upon collapse of fibrosis of the lung. The heart is pressed out of position by effusions of fluid —inflammatory, serous, or bloody—into either pleural cavity; by pneumothorax of either side; by intrathoracic tumors; by hypertrophous emphysema, or other causes of enlargement of the lung; by extensive pneumonic consolidation, or by abundant pericardial effusion of any kind. Certain conditions of the abdominal contents produce a similar effect, for example, gaseous distention of the stomach and intestines; enlargement of the liver and other solid organs; abdominal tumors of all kinds, and ascites when considerable.

In displacement of the heart toward the right, the condition is usually the result of effusion into the left pleural cavity; of contracting processes of the right lung or pleura; of left pneumothorax; and of tumors of the left side of the chest, or of the mediastinum. In extreme cases the heart may be displaced toward the right side until the impulse is found in the axillary region.

M. F. J., aged 46, a rubber-worker. His duties involved the inhalation of considerable quantities of soapstone, as well as carbon bisulphid for seven years. There is no family history of tuberculosis, neither of his having had pneumonia or pleurisy. His only sickness of recent date was an acute rheumatism in 1895. Present condition reveals a cough, shortness of breath, which begun seven years ago. He has had much headache, and pain in the left chest throughout his illness. For two years the cough was very dry; at present expectoration is abundant, and comes in somewhat paroxysmal seizures. No tubercle bacilli have been found. The injection of tuberculin developed absolutely no reaction.

Inspection shows general anemia; some debility; dyspnea. Complexion dark; emaciation moderate. Chest bulging at costo-chondral junction; respiratory movement hurried; restricted intercostal retraction. Apex-beat, fifth space, right nipple line; upper border, upper fifth rib. Right border, anterior axillary line. Left border, right border of sternum. Lower, contiguous with the liver.

Height, 5 feet, 8 inches; weight, 124 pounds. Tape measures: Right lung, expiration, 17 1/2 inches; inspiration, 18 inches. Left lung, expiration, 16 3/4 inches; inspiration, 17 inches. Combined expiration, 34 1/4 inches; inspiration, 35 inches. Temperature in the morning 97.5; noon, 98; and evening, 98. Pulse, 92; rhythm, regular. Heart: Valvular sounds clear; moderate thickening of arteries. Upon percussion of left lung anteriorly dulness is found extending from the supraclavicular, clavicular, and infraclavicular regions. Upon the right lung anteriorly there is hyper-resonance, which extends from the lower border of the first rib down to the lower border of the third rib in a semicircular line about one inch to the right of the costosternal articulation. Posteriorly, the lower border of the right lung shows increasing dulness extending from the lower border of the eleventh rib up to the inferior border of the sixth rib posteriorly. Posteriorly, in the right lung, extending downward from the superior border of the fourth rib down to the eighth rib anteriorly, typical bronchial breathing with moist, fine bubbling rales and increased vocal fremitus are found. There is great dyspnea upon exertion in city air, less so in country air. This is aggravated after eating a hearty meal. Patient has chronic constipation, bowel movement about once in five days. This condition has resisted treatment as to curative results. The constipation is doubtless due to mechanical engorgement of the lower bowel and rectum. The author's conclusions, based upon the history as well as the present clinical findings, are that the case is one of acquired dextrocardia, due to fibroid phthisis and an antecedent attack of pleural pericarditis.

Treatment consists in removing the exciting cause of the dextrocardia, and, necessarily, the displacement would tend to correct itself. This general principle of treatment can be applied to only a limited extent in this case. The exciting cause is of too chronic a character, and the lesions resulting from the same too permanent, to admit of entire removal. Treatment is therefore mainly directed toward maintenance of the best possible physical condition, and the relief of acute symptoms as they may arise.

COMPLETE TRANSPOSITION OF VISCERA, INCLUDING LUNGS.

DR. GEORGE W. WEBSTER reported a case of this kind. He believes the lungs are transposed, for the following reason: On account of its size, and the angle at which the right bronchus is given off, and possibly for other reasons, the percussion sound on the right side in the infraclavicular space is slightly higher in pitch. In the same situation the normal respiratory murmur is slightly harsher in quality and raised in pitch, and the normal vocal resonance is increased there. In this case the normal disparity is reversed, warranting the conclusion that the lungs are transposed. Congenital anomalies and malformations of the heart are interesting. Recently Féré has demonstrated that marked modifications in development may be produced in the chick by injecting pathogenic germs and toxins into eggs undergoing incubation. These experiments show that agents which produce disease during extrauterine life, and later intrauterine existence, give rise to malformations during the earlier phase of existence. Ballantyne puts it thus: "The same causes are in action in both periods, but when influencing an embryo so far developed as to have specialized

organs, the result is disease. When, on the other hand, influencing an embryo, in which such specialization has not been carried on to the same extent, the result is a malformation. In the one case the results are pathological; in the other, teratological." Causes of congenital diseases and malformations are similar and may be identical. Among internal displacements, transposition of the viscera is perhaps the commonest. Dextrocardia may be present without transposition of the viscera, but such cases are rare.

Two hypotheses have been proposed in explanation of this anomaly. Dr. Frazier suggests that the transposition may be due to the subject having been one of twins which were developed from a single ovum, and in which dichotomy was complete. Von Baer has found that in a few instances the embryo lies with its left side directed toward the yolk, whereas the right side is normally in this position.

DR. ROBERT H. BABCOCK stated that he was interested in the subject of dextrocardia, both congenital and acquired, and in his early practice he encountered four cases within two years. Autopsies were made in two of them. He was much interested in the manner in which the heart could become displaced so extensively to the right. There must be some rotation of the heart, and in looking up the subject he found there was great diversity of opinion expressed on that point, some maintaining that as the heart was pushed over to the right, it rotated on its long axis in such a manner as to bring the left ventricle to the front and the right chambers farther to the right and posteriorly, others maintaining again that the heart rotated on its long axis so as to bring the right chambers more to the front and the left chambers more to the rear than they are normally. In one of his cases, a boy, 3 or 4 years of age, the heart was extensively displaced to the right in consequence of retraction of the right lung and pleuro-pericardial adhesions. There were systolic murmurs over the base of the heart, and he believed them to be vascular. At the autopsy it was found that the heart had rotated so that the right chambers came well to the front and over toward the left side, and the superior vena cava and innominate were drawn across the aorta in such a way as to produce a very considerable obstruction to the arch of the aorta. This obstruction had led to extreme dilation of the left ventricle. There were also hypertrophy and dilatation of the right ventricle in consequence of tension in the pulmonary artery.

The second case of his series that came to autopsy was a young man who died of tuberculosis, in whom the left lung was found absolutely destroyed, the left half of the thorax converted into a huge pyopneumothorax, the bronchial tubes cut off and sealed, and that half of the chest containing about a pint of sweet-smelling pus, the walls being lined with cheesy material. The heart was displaced to the right side, and there were tubercles upon the pericardium. The right lung was contracted, more or less cirrhotic, drawn back and reduced in size. The heart was rotated in the opposite direction, the left chamber coming more to the front, producing considerable twist in the axis of the aorta, stretching the arteries and veins in a peculiar fashion, producing considerable tension and increase of blood-pressure, but there were no murmurs, such as are recognized in many cases of anemia, and which in those days he regarded as hemic murmurs.

The first case he happened to see of the series was a man who had a pronounced cirrhosis of the right lung; the heart lay absolutely horizontal in the right half of the thorax, and completely uncovered by lung.

The subject of congenital dextrocardia is more interesting from a pathological than a clinical standpoint. He had seen a recent statement to the effect that cases of congenital dextrocardia were apt to die of pulmonary tuberculosis. This interested him, because in the last case that came under his observation he had an opportunity to notice the development of pulmonary tuberculosis about a year after he examined the woman, although there was no tubercular history in the family. She came to him on account of heart-beat in the right side. There was no indication that that girl would develop pulmonary tuberculosis. When he saw her a year afterward she had pronounced pulmonary tuberculosis with bacilli in the sputum.

DR. GEORGE W. WEBSTER said that in 1875 Rokitansky, of Vienna, wrote his famous monograph on congenital cardiac malformations, and in it he pointed out that these congenital malformations of the heart are very likely to lead ultimately to either general or pulmonary tuberculosis. This statement has been shown to be too broad. It is well-known that congenital lesions, where they affect the pulmonary orifice, practically always lead to either general or pulmonary tuberculosis on account of the anemia of the lungs, which is always induced as the result of the valvular lesion. The views of Rokitansky were too sweeping, and his statements applied only to cases of congenital stenosis of the pulmonary artery and not to other malformations. He had seen nothing in medical literature that he recalled at the present time, and he had gone over Peacock's work very carefully where there was any reference to complete transposition of all the viscera leading to pulmonary complications, or to the likelihood of patients dying earlier from the complication of pulmonary tuberculosis.

DR. H. M. THOMAS, in closing the discussion, said that with reference to the exciting cause of heart displacements of the acquired type, the case he had presented appeared to have acquired the dextrocardia during his seven years' work in a rubber factory where he inhaled considerable carbon bi-sulphid. The man was in perfect health when he entered the Morgan and Wright factory, and after seven years' labor therein his dyspnea became so great and paroxysmal cough so marked that he had to discontinue working, so that the influence of employment was one cause, and the specific effects of the inhalation of carbon bisulphid the other.

The Kings County Medical Association.

Stated Meeting, Dec. 11, 1900.

President Dr. H. Arrowsmith in the chair.

TREATMENT OF ACUTE DYSENTERY BASED ON ITS ETIOLOGY AND PATHOLOGY, WITH SPECIAL REFERENCE TO USE OF MAGNESIUM SULPHATE.

DR. W. J. CRUIKSHANK said that from January till December, 1897, 97,000 persons had been stricken with dysentery in Japan, and 70,000 had died. In one province there had occurred in 1890 801 cases, with 225 deaths, and in 1891, 8390 cases with 2163 deaths, or a mortality of a little over 26 per cent. Every country in Europe had paid a heavy tribute to dysentery. In the tropics this disease destroys more lives than cholera, and has been more fatal to armies than powder and shot. In France dysentery was accountable for 1/20 of the total mortality in the army, and in Algeria it represented 1/5 of the total mortality. In epidemics occurring in temperate climates the mortality varied from 7 to 15 per cent. In tropical epidemic dysentery the mortality was between 20 and 30 per cent., although even so high a mortality as 60 or 70 per cent. had been noted in certain epidemics. Military experience in the tropics showed that acclimatization had no effect on dysentery. According to Pepper, this disease was responsible for the death of 300,000 of the soldiers during our Civil War. The recent official reports from the United States army and navy did not give detailed information regarding dysentery during the late war with Spain. In the year 1898 there had been 368 deaths from dysentery in Greater New York, and in 1899, 267 deaths. The preponderance of evidence seemed to be in favor of the amebic theory as to the etiology of this disease. Bacteriologists were agreed that dysentery is the result of microbic infection, but opinion was divided as to whether it was the result of a specific micro-organism or of several bacteria.

The speaker expressed the opinion that the so-called varieties of dysentery were chiefly founded on mistaken ideas regarding the etiology and pathology of the disease. Dysentery had been frequently confounded with simple diarrhea and enteritis. One of the most misleading of these so-called varieties was that designated as malarial dysentery. Dysentery is one disease, and one only, whether observed in the tropics as endemic, or in the temperate regions as sporadic. Even so careful and conservative a writer as Flexner had expressed the opinion that the conclusions of bacteriologists which had led to the establishment of various types of the disease might not be

strictly in accordance with fact. He was of the opinion that the causative agent of dysentery might not vary in these different types.

The reader of the paper expressed the belief that the underlying principle of treatment was purgation, in spite of the many statements of medical authorities to the contrary. The remedy he recommended was magnesium sulphate used in such a way as to secure depletion of the vessels, rather than purgation. He believed that this remedy was as nearly a specific for dysentery as quinin was in malaria, or mercury and potassium iodid were in syphilis. In all cases of acute dysentery, from the beginning of the attack until there was a subsidence of the symptoms, it should be administered in dram doses every two hours, dissolved in a very little water and mixed with a little aromatic sulphuric acid. If tympanites were present, it would rapidly subside under this treatment. At the end of forty-eight hours the stools would become biliary and feculent in the vast majority of cases. When the stools had become nearly normal the medicine could be gradually withdrawn. The average duration of the disease under such treatment was from three to seven days. The practitioner was often tempted in these cases to give a hypodermic injection of morphin to relieve the pain, but his experience had taught him that almost as great relief followed the use of the magnesium sulphate. By stimulating the naturally sluggish liver to greater activity the sulphate increased the biliary secretion, and in this way acted somewhat antiseptically, he believed, though he well knew that this was a mooted question in physiology. This remedy, by abstracting water from the tissues and pouring it into the intestine, depleted the mucous membrane, diminished the inflammatory process and rid the intestinal canal of the infectious material. The physiological action of this medicine had been known and appreciated for years by gynecologists and surgeons. Dr. Cruikshank said that his attention had been directed to this method of treatment by a case which he had treated some years ago, according to the plan then in vogue, that is, the alternate administration of sulphate of magnesium and opium. He had noted the great improvement in all the symptoms following the use of the sulphate and the return of the dysenteric symptoms when opium and bismuth had been given, but he had not had the courage to depart from this approved plan of treatment, and on calling in eminent counsel it had been indorsed as the proper one. The patient had died after ten days. The author gave copious citations from a number of medical authors who had found magnesium sulphate exceedingly useful, and vastly superior to the other remedies commonly employed. His conclusions were: 1, dysentery is a disease of great gravity; 2, it is both contagious and infectious; 3, it is caused by the introduction into the system through food and drink, and also through the air, of a specific micro-organism the identity of which seemed still in doubt; 4, dysentery is one disease in whatever latitude it is found, and the only varieties are those based on the intensity of the morbid process; 5, the therapeutic agents suggested for the treatment of acute dysentery are useless and often harmful, and magnesium sulphate acts as a specific.

DR. IRA VAN GIESON called attention to the unfortunate tendency of the present time to unduly exalt the sphere of the laboratory in the study of the science of medicine. He had personal knowledge of the patient way in which the author had elaborated this subject, and was free to say that the therapeutic discovery contained in this paper had been made independently of others and without a knowledge of what others had previously done.

DR. E. H. BARTLEY was disposed to differ from the author in his view that all cases of dysentery are true dysentery, not excepting acute colitis with bloody discharges. Cases were cited in illustration of this point. Again, most bacterial diseases are self-limited, but statistics and all our experience showed that this was not the character of dysentery. He also doubted the possibility of communicating the disease through the air, because the amebæ do not fly, and when dried up they are no longer contagious. Perhaps the author had not dwelt sufficiently upon the hepatic stimulation which results from the treatment which he advocates. Such stimulation was produced by strong saline solutions, especially solutions of sulphate of soda and magnesium. This increases the oxidation processes of the liver, and augments the activity of this organ as a destroyer of poisons, thus assisting the system to resist the action of the poisons thrown into the circulation by the pathological process. The treatment also caused a freer portal circulation and unloaded the small intestine. Dysentery was really a constipating disease, as there is constipation in the small intestine, and this gives rise to congestion and obstructed circulation in the rectum.

DR. JACOB FUHS said that this treatment was a rational one, which was shown not only by the results attained, but by its applicability to other infectious diseases. Nature's method of treating this disease was eminently eliminative, and it seemed strange that the profession should have fallen into the way of administering such remedies as were distinctly opposed to Nature's method. The only explanation that he could offer for this was that the great distress of patients suffering from dysentery had tempted physicians to resort to narcotics. It had been customary in the past to try to counteract the noxious effect of the narcotics by giving castor-oil; hence the popularity of the old opium and castor-oil treatment. He had found the sulphuric acid treatment useful. While he had had only a very limited experience with the treatment with magnesium sulphate, so far as it had gone it had been eminently satisfactory.

DR. LEWIS W. PEARSON said that it had been his practice to begin the treatment of dysentery by giving a dose of magnesium sulphate or of castor-oil, and then follow this with opium, bismuth and muriatic acid. Recently he had tried another method—the giving of enemata of permanganate of potassium, using at first one quart of a 1 to 4000 solution, and later a 1 to 2000 solution. The latter strength had been kept up until the patients had nearly recovered. Recovery had been very prompt in each instance. He had been led to try this method because dysentery is a bacterial disease.

DR. CRUIKSHANK, in closing the discussion, said that there might exist an acute colitis from other causes, but such a case was not dysentery. The so-called varieties of dysentery were simply the result of the absorption of varying quantities of toxin. Dysentery was a specific disease and required a specific plan of treatment.

Cleveland Medical Society.

Regular Meeting, November 24, 1900.

President DR. HENRY S. UPSON in the chair.

PRESENTATION OF CASES.

DR. WILLIAM E. WIRT presented a man on whom he had operated for club-foot. The deformity in this case was an extreme equinus with some degree of varus. He did a tenotomy of the Achilles tendon, following which he corrected the deformity by force. He showed that the result gave the man a fairly useful foot. He also presented a child 20 months old on whom he had successfully operated without cutting. He also presented a case of periostitis of the tibia in a boy 4 years old. He discovered that the lesion had a specific origin, and by using potassium iodid he had secured a good result.

CONGENITAL DISLOCATION OF HIP-JOINT, WITH ESPECIAL REFERENCE TO LORENZ'S BLOODLESS REDUCTION.

DR. WALTER G. STERN said that the congenital dislocation of the hip-joint has been considered quite rare, but as the knowledge of its curability is disseminated, the number of cases treated and reported has so increased that Hoffa says "it is the most common congenital affection." It is stated that 87.8 per cent. of cases occur in females; 1/3 are bilateral. The most frequent dislocation is upward and backward upon the dorsum ilii. An acetabulum is always present, mishapen and generally filled up with connective tissue. The muscles are distorted, the pelvis flattened and tilted, sometimes enough to cause obstruction to labor.

The symptoms are limping or waddling gait—explained by Trendelenburg as an adduction gait, in which the side of the pelvis opposite to the leg bearing the weight of the body sinks

down in walking—shortening the limb, flattening of the buttocks, etc. The trochanter stands above Nélaton's line, and the head can be felt backward among the gluteal muscles. The prognosis for untreated cases is bad, as nearly all complain, later in life, of pain on walking or standing and even inability to walk. Every case treated between the ages of 4 and 10 years can be cured (freed) of the dislocation by one means or another. The safest, quickest and best method is the "bloodless reduction" of Lorenz. The most suitable age is between 4 and 8 years. The adductor muscles are torn by forcible abduction. Then the thigh is flexed, and extension made in a vertical direction with the hand or a wedge pressing on the trochanter from behind. When the head comes forward to the level of the acetabulum the leg is abducted, pressure on the trochanter being increased, when with a palpable and audible snap the head suddenly pops "over the posterior rim" of the acetabulum. The reduction can also be affected "over the upper rim" with extension made by two assistants pulling on a skein slung around the thigh. Traction by means of a screw has been given up, on account of the danger of fracture to the collum femoris. The reduced leg is placed in plaster of paris in the position of flexion, extreme abduction and slight inward rotation of the foot for four to six months. A high shoe is placed under the reduced leg to permit the patient's walking about. "Functional burdening" of this leg causes the acetabulum to become deepened, and after six months the joint is quite stable. The leg is again fixed for three months in a medium position. Then the patient is given a slightly higher shoe under the sound foot, to abduct the reduced side slightly, and gymnastics and massage complete the cure. Lorenz reports but 10 per cent. of total failures. If this fails the joint can be opened and the bloody reduction of Hoffa, in which the acetabulum is scooped out with a Volkmann spoon, performed Should this fail, resection of the head, with bony ankylosis, will give the patient a useful joint.

DR. WILLIAM E. WIRT, in discussing the paper, said that he thought the author was a little too enthusiastic in regard to the results to be obtained by the Lorenz method. He quoted a report made by Whitman showing that, while the method secured reduction, it did little toward relieving the lameness. In a certain number of cases the bloodless method is the best. One advantage of the bloodless method is that it does no harm to the patient. He reported a case of his own in which he had tried the bloodless method and placed a plaster cast on the limb. While away for a few months another physician removed the cast and pronounced the result a cure. Within a week dislocation recurred and the work had to be done over again. Fixation must be maintained for a long time in order to obtain a cure. He showed a brace which he had used to maintain the limb in position after the cast had been removed. He said that it required a good deal of force to reduce the dislocation by the bloodless method, and that the force has to be continued for a considerable length of time.

DR. WALTER G. STERN, in closing said that if a case was taken in time it could be cured by the Lorenz method. In case of failure at the first trial, a second or third may succeed. Finally, the bloody method can be tried. The advantage of the Lorenz method is that while the results may not be perfect, yet it does secure a stable limb. He had seen 220 cases in Lorenz's clinic in which there occurred only three fractures of the femur. These fractures occurred in cases of great deformity in which several sets of assistants were tired out in pulling for extension. Lorenz uses assistants for this purpose, and has discarded all screw devices.

PRESENTATION OF SPECIMENS.

DR. AUGUSTUS F. HOUSE presented specimens of adenoma of the thyroid gland. He had removed nine during the last six months, and had operated by making a long, circular incision around the base of the neck and turning back a large flap of skin over the tumor. In this way the scar is where it will not be seen, and keloid is not so likely to follow. In the cases which were anemic he had put from one to two quarts of saline solution into one of the veins in the neck. None of the operations were done under local anesthesia.

ALBUMINURIA WITHOUT NEPHRITIS.

DR. P. MAXWELL FOSHAY reported a case in which albumin had been detected over a year ago and at the present time there is still a trace to be found. The chief point of interest is that at the end of fifteen months there are no casts or other foreign elements in the urine. There is no change in the vascular system, and no symptom of systemic disease. The patient is a young man, and the albumin had been found in an examination for life insurance. Careful search failed to reveal any cause for the albuminuria. While many such cases entirely recover, and while prognosis in the average is good, yet they are not safe risks for life insurance, because we can not yet distinguish between those cases which subsequently develop nephritis and those which do not. Therefore, in the present state of our knowledge, such cases have to be refused life insurance.

DR. HENRY W. ROGERS had seen a similar case, which, at the end of two years, developed a true nephritis. He said that the arteries should be carefully examined as well as the urine.

AORTIC ANEURYSM.

DR. FREDERICK C. HERRICK showed a specimen of a small aortic aneurysm and complete aortic insufficiency. The heart was very large, weighing 828 grains, and the ventricular walls, especially the left, were very much hypertrophied. There was absolutely no aortic closure when the case was studied before death. Several times there had been a pulsus bigeminus and pulsus alterans. The area of dulness was very large, but there was no aneurysmal bruit.

DR. W. T. HOWARD said that he had reason to think that aneurysm was very common in Cleveland and vicinity. He had seen many more cases since he came here than he had in Baltimore. Aneurysm of the aorta is not the cause of hypertrophy in the left ventricle. Dilatation of the aorta does not increase the vascular tension, nor cause cardiac hypertrophy.

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Toronto Clinical Society.

Stated Meeting, held November 14, 1900.

POST-HEMIPLEGIC MOTOR APHASIA.

DR. W. H. PAPLER presented a man aged 43, who in 1891 had severe headaches lasting for a couple of weeks and followed by weakness of the right arm and leg with some difficulty of speech. From this he gradually improved. Two years thereafter he had another attack, at which time he remained in the hospital perfectly insensible for three weeks. He regained consciousness and left; there was no paralysis at that time. About six months after that he had a series of attacks of temporary insanity lasting from two days to two weeks at a time and six to eight months elapsing between the attacks. He is now the subject of these attacks. During them he can not speak voluntarily nor answer any questions. He can not repeat words and can not read aloud nor write. In most of the attacks he uses oaths and unintelligible gibberish. The attacks are now very frequent, varying from one to eight in twenty-four hours and lasting a minute or less. There is no paralysis remaining now, but there is slight rigidity of the right leg and walking is defective. Dr. Papler considers that there was originally a hemorrhage or a thrombus in the middle cerebral with serious injury to the posterior part of the third left frontal convolution. The patient has been taking a dram of potassium iodid three times a day.

TRAUMATIC PARALYSIS OF THE RIGHT RECURRENT LARYNGEAL NERVE.

DR. H. E. TREMAYNE, Lambton Mills, presented a boy of 14 years, who about ten weeks before, while going up a hoist, lying on the floor looking downward, had received a jam in the neck between the floor of the hoist and the floor above. He was seen by the Doctor a few minutes afterward, and complained of very severe pain on the slightest movement of the neck. His voice was very hoarse and there was a puffiness at the root of the right sternomastoid; but the skin was not broken anywhere. About November 7 he was again seen by the Doctor, when he complained of cough, which caused him to vomit up his food. Examination of the throat revealed the right cord immovable.

TUBERCULAR TUBES, WITH ACUTE PERITONEAL INFECTION.

DR. H. A. BRUCE read a history of this case and presented the specimens. It occurred in a young woman of 26 years, who had always been healthy and had been accustomed to heavy domestic work. Five weeks ago she suddenly was taken with severe pain in the abdomen and vomiting, with temperature, 102, and pulse 110. Her abdomen rapidly filled with fluid. There was no evidence of disease in the lungs, kidney or bladder. Her uterus was found fixed with a fulness on either side. On opening the abdomen, it was found filled with a dark greenish fluid of which several quarts were removed. The tubes were of the size of a small banana, the peritoneal surfaces soft and red, and looking like granulation tissue. They were removed, and the patient made a good recovery. It is now five months since she left the hospital and she continues in good health. Microscopic examination revealed tubercle.

ALOPECIA UNIVERSALIS.

DR. GRAHAM CHAMBERS presented a female of 20 years; she said that her hair began to fall out in patches when she was about 5 years of age, from which she subsequently fully recovered. At the age of 12 she again began to suffer in patches, and since that date has never been free from the disease. At the present time she has no hairs on the body with the single exception of two small fine hairs on the anterior portion of the scalp. In 1898 she was treated for interstitial keratitis.

ATAXIC PARAPLEGIA.

DR. GRAHAM CHAMBERS presented a girl of 17 years, with a negative family history. Menstruation began at 14, but since has been very irregular. In March last the cellar of the house where the patient was working was flooded, and not knowing that she was menstruating at the time, she took off her shoes and stockings and waded through the water, which came up to her knees. Two days later she complained of feeling tired and that her left leg was so heavy she could not lift it. A month later the disease extended to the right leg, with numbness and heaviness, but she suffered no pain in the legs or back. Both ankle and knee clonus are present in the left leg. Romberg's sign is present; and the patient can not distinguish hot from cold on the plantar surfaces of the feet and on the sides of the ankle-joints. Several patches of skin between the ankles and the knees are anesthetic. Patient is now unable to walk without aid.

HYDATID CYST OF THE PANCREAS.

DR. GEORGE A. PETERS reported this case, which occurred in the practice of Dr. MacKinnon, of Guelph, and on which Dr. Peters had been asked to operate. It occurred in a young man of 20 years of age, of Spanish birth, a resident of the Argentine Republic, who was on a short sojourn in Ontario. In May, 1900, he came under the care of Dr. MacKinnon. For two or three years the patient has suffered from attacks of pain obscurely located in the stomach and bowels, and latterly had his appendix removed, at which time a tumor could be felt in the left hypochondriac region, which at times was the seat of great pain. The cyst was first aspirated, and thirty ounces of a limpid fluid of sp. gr. 1.13 withdrawn. Much relief was experienced, but the cyst slowly filled, and the temperature and pulse showing that septic process was proceeding, it was decided to operate. On examination, a rounded tumor could be felt below the ribs on the left side, about midway between the nipple and sternal lines. Its relation to the pancreas was determined by the stomach resonance above the tumor and between it and the liver as well. Between the spleen, kidney and tumor, resonance was also present. The operation was done from behind, the incision being made along the margin of the erector spinæ, three inches long. Considerable difficulty was experienced in its removal, owing to the toughness of its walls. An examination of the fluid shows numerous daughter cysts with their attached embryos as well as many separate hooklets. The specimens were exhibited by Dr. Peters, and the hooklets were well seen under the microscope. A search of the literature so far by Dr. Peters reveals no other reported case of hydatid cyst of the pancreas.

Therapeutics.

Phenosalyl in Laryngeal Tuberculosis.

Dr. S. von Stein, in *N. Y. Med. Journal*, states that phenosalyl is a bactericide which ranks next to mercury bichlorid in efficiency. He has used it in sixteen cases of laryngeal tuberculosis with marked results, always applying a local anesthetic first. Phenosalyl is composed of:

Acidum carbolicum	9 parts
Acidum salicylicum	1 part
Acidum lacticum	2 parts
Menthol	1/10 part

He claims that under this treatment dysphagia has improved, limited or diffuse infiltrations have become smaller, and improvement when ulceration is present combined with infiltration. The dyspnea, expectoration and bacilli were reduced. He regards his treatment as positively curative.

Acute Capillary Bronchitis.

The following mixture has been recommended by Whitla, in the "Manual of Therapeutics:"

R.	Vini antimonialis		
	Spiritus chloroformi, āā	℥iv	16
	Spiritus ammoniæ arom	℥i	32
	Liquoris ammonii acetatis	℥ii	64
	Aquæ q. s. ad	℥viii	256
M.	Sig. A tablespoonful every two hours.		

Treatment of Postpartum Hemorrhage.

Dr. Byers, of Belfast, in the *Amer. Jour. of Obstetrics*, advocates the following treatment for hemorrhage from relaxed uterus, which should be resorted to in the order named:

1. External uterine massage.
2. Irrigations of the uterus with hot saline solution.
3. Introduction of the hand into the uterus.
4. In case of failure of the first three, bimanual compression of the uterus.
5. Gauze plugging the uterus.
6. The drawing downward of the uterus.
7. If hemorrhage comes from the lacerations of the genital tract, it is recommended to stitch if you can, and plug if you can not.

Dr. James H. Etheridge, former professor of obstetrics, Rush Medical College, always insisted on making pressure on the abdominal aorta in severe postpartum hemorrhages.

Abortive Treatment of Boils.

Dr. Jorissene, a French physician, states that a good application for aborting boils consists of:

R.	Hydrarg. oxidi rubri	℈i	4
	Lanolini	℥x	40
M.	Sig. To be rubbed in well once a day, or oftener on large ones. Acne and whitlow can be subjected to the same treatment.		

—*Pract. Revue.*

Nerve Tonic.

As a tonic in functional nervous diseases Dr. Julius Flesch gives the following combination and states that he has obtained excellent results from its use:

R.	Quininæ ferrocitratis	gr. xlv	3
	Strychninæ nitratis	gr. i	06
	Extracti kola fluidi		
	Sodii glycerophosphati āā	℥vi	24
	Dissolve slowly by heat and add:		
	Syrupi aurantii	℥vi	192
M.	Sig. One teaspoonful after each meal.		

—*N. Y. Med. Jour.*

Treatment of Thrush in Infants.

Escherich suggests a small pledget of sterile cotton thoroughly impregnated with about three grains of finely pulverized boric acid to which a little saccharin has been added. The pledget is then placed in a little bag made of silk and given to the child to suck. The saccharin being pleasant, the child is quite willing to retain the bag in the mouth, so the boric acid acts constantly on the parasite. A new sac is used each day. Cure is said to be prompt. —*Phila. Med. Jour.*

Treatment of Croup.

The following outline for the treatment of croup was published by De Guy in *Jour. des Practiciens.* He states that aside from the use of antitoxin, it is wise in many cases to use local antiseptics.

As a disinfectant, if the breath is fetid and the throat is sore the following is advised:

℞ Chloral hydratis ..... ʒi-ii 4-8
Aquæ destil ..... Oii 1024

M. Sig. Use with a soft catheter as a wash for the postnasal spaces and pharynx, the child being held in such a position that the head is below the body; or:

℞ Potassii permangan ..... gr. iv 25
Aquæ—boiled ..... Oii 1024

M. Sig. To be used the same as the above.

Hydrogen peroxid in the proportion of one to ten may be used for similar purposes. These washings of the postnasal spaces are continued as long as necessary to overcome the fetor and to combat the development of the false membrane or until the membrane has disappeared, in order that the Loeffler bacillus may be destroyed.

TO OVERCOME THE DEPRESSION.

For the purpose of overcoming the depression, which is frequently pronounced, the following is given as a rectal injection:

℞ Caffeinæ
Sodii benzoatis, āā ..... gr. x 66
Aquæ destil ..... ʒss 16

M. Sig. Per rectum once or twice daily.

CARDIAC TONIC.

As a cardiac tonic by the mouth the following is recommended:

℞ Caffeinæ ..... ʒi 4
Tinct. kolæ ..... ʒvi 24
Ext. cinchonæ fluidi ..... ʒiii 12
Vini ..... Oii 1024

M. Sig. Take a wineglassful several times a day.

Artificial serum may be injected in quantities varying from two to ten ounces where caffein is not sufficiently stimulating. The serum is composed as follows:

℞ Sodii chloridi ..... ʒii 8
Sodii sulphatis ..... gr. xlv 3
Aquæ destil ..... Oii 1024

M. Sig. By hypodermoclysis.

TO CONTROL NERVOUS EXCITATION.

The nervous excitation may be controlled by the following:

℞ Sodii bromidi ..... ʒi 4
Antipyrini ..... ʒii 8
Aquæ menthæ pip ..... ʒii 64
Syr. aurantii ..... ʒiv 128

M. Sig. A teaspoonful, according to age every few hours.

De Guy states that sodium benzoate is a valuable remedy in case bronchitis should develop:

℞ Sodii benzoatis
Aq. laurocerosi, āā ..... ʒii 8
Syr. aurantii
Aq. menthæ pip., āā ..... ʒviii 256

M. Sig. One teaspoonful two or three times a day.

DEODORIZER.

As a spray, to be used in the atomizer for the purpose of deodorizing the atmosphere of the room:

℞ Eucalyptol
Essentiæ thymi
Essentiæ citron
Essentiæ lavendulæ, āā ..... ʒi 4
Alcoholis ..... ʒv 160

M. Sig. As a spray, to be used in the room.

Spasmodic Croup.

℞ Ammon. carb. ..... gr. ii 12
Syr. senegæ ..... m. x 66
Mucilag. acaciæ ..... ʒii 8

M. Sig. One such dose to be given every two hours, unless patient vomits; if vomiting occurs diminish the dose.

AS A SPRAY.

Also in a steam atomizer:

℞ Sodii carbonatis ..... ʒi-ʒii 4-8
Aquæ q. s. ad ..... ʒiv 128

M. Sig. Use every half hour. —Wharton.

IN TABLET FORM.

℞ Ext. cannabis indicæ ..... gr. 1/20 .003
Ext. hyoscyami ..... gr. 1/16 .004
Tinct. opii camphoratæ ..... m. v .33
Syrupi ipecacuanhæ ..... m. x .66
Ext. glycyrrhizæ ..... gr. ii .12

M. Ft. compressed tablet No. i. Sig. One such dissolved in water every twenty minutes.

℞ Chloralis hydratis ..... gr. lxxv 5
Potassii bromidi ..... gr. xlv 3
Ammonii bromidi ..... ʒss 2
Aquæ cinnamomi ..... ʒii 64

M. Sig. A teaspoonful in water and repeat in twenty minutes. —Holt.

CALOMEL FUMIGATION.

Holt states that, leaving out antitoxin and surgical operation, the only therapeutic measure that can be said to be of much avail in treatment of membranous croup is calomel fumigations. He does not regard it as a substitute for antitoxin but is beneficial where circumstances make the use of antitoxin impossible.

In giving calomel fumigations the child should be placed in a closed tent either in a sitting posture or lying down. In emergency cases a very simple arrangement, according to Holt, can be constructed by taking a piece of tin two inches wide and ten inches long and placing it over an alcohol lamp so that the flame will come close to the tin. The lamp is lighted and placed beneath the tent. Place ten or fifteen grains of calomel on the plate and allow it to vaporize for ten to twenty minutes, and repeat every one, two, or three hours, according to the severity of the case, being careful not to have the fumes too concentrated.

Orthoform in Toothache.

Hildebrand, in *Ther. Monatsch.*, states that orthoform instantly and completely relieves severe pain due to inflammation of the pulp in decayed teeth. It should be applied in alcoholic solution on absorbent cotton.

Tinea Tonsurans (Barbers' Itch).

The *Jour. of Med. and Science* publishes the following formula, recommended by Dr. Hodara, of Constantinople, for treating barbers' itch:

℞ Sulphuris ..... ʒiiss 10
Zinci oxidi ..... ʒv 20
Sacchari ..... ʒv 20
Glycerini ..... ʒiiss 10
Lanolin
Vaselini, āā ..... ʒv 20

M. Sig. Apply in thick layer night and morning until the crusts have been removed, then once a day.

Pleurisy.

The following mixture has been suggested by Matas to relieve the cough and remove the serofibrinous exudation:

℞ Ammon. carb. ..... ʒss 2
Aquæ laurocerasi ..... ʒss 16
Syrupi lactucarii
Syrupi senegæ āā ..... ʒi 32
Syrupi tolutani q. s. ad ..... ʒiv 128

M. Ft. mistura. Sig. One tablespoonful every two hours.

Medicolegal.

Disregarding All Medical Testimony in Case.—Where it appears, in a personal injury case, that the jury, in reaching its result, must have disregarded the whole range of the medical testimony of the plaintiff or defendant, notwithstanding the credibility of the witnesses stands unimpeached, and that their

testimony can be reconciled with the other evidence in the cause, this of itself, the Supreme Court of New Jersey holds, in Barry vs. Pennsylvania Railroad Company, is ground for a new trial.

Waiver of Privilege in Action for Services.—Waiver of privilege as to one or more of several attending or consulting physicians, the fourth appellate division of the Supreme Court of New York holds, in the case of Hennesy vs. Kelly, is not a waiver as to all, as held in the decision reported on page 451 of THE JOURNAL of August 18, 1900. In particular, it holds that as to two physicians called in consultation at different times there was a waiver of privilege as to the one because the patient had given evidence as to the occasion when he was present, and as to which he testified, but that the evidence of the other was not admissible because no evidence with reference to the occasion he was present had been given by the patient.

May Show Condition of Womb and Probable Sterility.—If a married woman is injured by the negligent act of another, she is entitled, the Court of Appeals of Kentucky holds, in the case of the South Covington and Cincinnati Street Railway Company vs. Bolt, to maintain an action for damages, and the same criterion of recovery exists as to her as to a man or a single woman. Moreover, it holds that the married woman injured in this case was entitled to show by the physician who attended her the condition of her womb, and that in his opinion she could never again bear a child, although, as the judge properly instructed the jury, the jury could not consider the question of her sterility in fixing damages. The court says that she was entitled to show the extent of her injuries, and in describing the condition of the womb, if it showed that she would probably be sterile thereafter, it was proper for it to go to the jury. It was her right to show the extent of her injuries, but, if a certain condition which appeared to exist could not enter as an element of the question of damages, it was proper for the court to tell the jury so, but the necessity for doing that could not deprive her of her right to show the extent of her injuries.

Validation of Imperfect Registration Not Retroactive.—Section 148 of Chapter 661 of the New York Laws of 1893 pertaining to the public health and regulating the registration and licensing of physicians and surgeons provides that, if there has been an "imperfect registration" through some technical or unintentional omission, the board of regents may, in the manner therein prescribed, "make valid the previous imperfect registration." But this provision, the fourth appellate division of the Supreme Court of New York holds, in the case of Ottaway vs. Lowden, is not retroactive in effect. This was an action to recover for medical services. When the services were rendered the plaintiff possessed no license, and had no authority to prosecute his calling. He claimed that his imperfect registration from his failure to get his diploma from a medical school in another state properly indorsed had been validated under said Section 148. This validation, however, occurred after the services in question were rendered, and the court holds it insufficient, not being retroactive, to authorize the maintenance of this action. It says that the state board cannot endue one with a cause of action where none existed before. It may do away with the necessity of any further license or registration by injecting life into papers already filed, and give one a "clean bill of health" for the future; but that under this act is the extent of its authority. This interpretation, the court admits, may operate as an injustice in a particular case, but the statutes, it goes on to say, are a safeguard both to the public and those engaging in the practice of physic and surgery, and should be rigorously enforced. During the time the services in question were rendered the plaintiff was liable to indictment and conviction for practicing physic and surgery without proper warrant. If this act were to be given a retroactive effect, there would be the anomalous condition of affairs whereby he could recover for services the rendition of which by him constituted a crime. There is no warrant in the law for the state board to determine that he in fact during all this period was licensed to practice.

Postponement of Marriage for Venereal Disease.—The principal question before the Supreme Court of Missouri, Division No. 1, in the breach of promise case of Trammel vs. Vaughan, was whether the defendant had a right to postpone marriage with the plaintiff upon the appearance between the date of the contract and the date for its performance, apparently without his fault at that time, of what he denominated a loathsome venereal and contagious disease; in other words, stated broadly, whether the defendant would have been justified in marrying the plaintiff, even with her consent, while he had the disease. Of course, the court says, if the defendant entered into the contract knowing of such an impediment to its consummation as a disease rendering it unsafe or improper for him to marry, it would be an aggravation of the plaintiff's damages, and she would be entitled to refuse to marry him, and to treat his condition as a breach of the contract—a fraud perpetrated upon her. But, if the thing to be performed becomes unlawful, without his intervening fault, after the contract is entered into, the performance is excused by force of law. So, the court finds that, while there are few reported precedents for the conditions presented in this case, it has been held that if a party to a marriage contract develops a disease which renders it unsafe or improper for him to marry, without intervening fault on his part, between the date of the contract and the date appointed for the marriage, he is entitled to have the ceremony postponed until the result of the disease is known or he is cured. It also points out that marriage is not merely a civil contract, but one to which the state is a party and has an interest in, and one which implies that the contracting parties know of no legal or physical impediment to the contractual relation and its consequences. Then, it says that willfully to communicate a venereal disease is clearly cruelty, and is a ground for divorce, whether specifically enumerated in the statutory causes for divorce or not. It recalls, too, that it has been stated that intercourse with a woman, though she was willing thereto, by a man who was infected with a venereal disease, would constitute the act a common assault, for the fraud would vitiate the consent. Now, if these principles be correct, it must also be true, the court holds, that it is legally as well as morally wrong for a man, while infected with such a disease, to marry; and a man, for such cause, is entitled to demand a postponement of the marriage until he is cured. The idea that the ceremony should be performed, and the consummation of the marriage postponed until he is cured, it continues, is not only intolerable, but obnoxious to a proper subservience of the public interests and morals. This, too, whether the woman knows his condition, and consents to such an arrangement, or not; for, though she may be willing to waive the defect, or be indifferent to the condition or its consequences to her and her children, the third party to the contract, the state, has a right to and does object. If the disease is of a temporary character, and can be easily cured, the defendant is entitled to postpone the marriage until he is cured; and, if the disease is of a permanent character, he is not only entitled to refuse to carry out the contract, but it is his duty to do so.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

New York Medical Journal, Dec. 22.

1 *The Treatment of Supra-Condyloid Fracture of the Humerus. A. R. Shands.
2 A Case of Superimposed Uvula. Thomas A. Deblois.
3 *The Combination of a Plaster-of-Paris Jacket with a Brace to Correct and Retain Correction of the Kyphosis of Pott's Disease of the Spine. A. MacKenzie Forbes.
4 *Recrudescing Angina, Due to Friedlaender's Bacillus. Emil Mayer.
5 *Intraspinal Cocainization from the Anesthetist's Standpoint. S. Ormond Goldan.
6 *The Diagnosis of Empyema in Children. F. L. Wachenheim.
7 A Report Upon One Hundred and Seventy Cases of Appendicitis. Robert T. Morris.

Boston Medical and Surgical Journal, Dec. 20.

8 *Remarks upon Questions Arising During the Removal of Fibroids, with Especial Reference to the Technique of the Operation. Maurice H. Richardson.

9 *The Value of the Hot Water Immersion Bath in the Treatment of Threatening Puerperal Eclampsia. Charles M. Green.
10 *A Plea for Larger Doses of Antitoxin in the Treatment of Diphtheria. John H. McCollom.
11 Case of Myasthenia Gravis Pseudoparalytica. W. E. Paul.

Philadelphia Medical Journal, Dec. 22.

12 *The Diagnosis of Calculous Disease of the Kidneys, Ureters and Bladder by the Roentgen Method. Charles Lester Leonard.
13 Acute Infective Endocarditis Following Vaccination: Recovery. Warren Coleman.
14 *The Use and Abuse of Zoological Names by Physicians. Ch. Wardell Stiles.
15 Primary Carcinoma of the Pancreas, with Reports of Four New Cases. Frederick A. Baldwin.
16 Angina Ludovici. G. G. Ross.
17 A Case of Deciduaoma Malignum. Joseph McFarland.
18 Composite Teratoma of the Ovary; Pathologic Report. Edgar Allen Jones.
19 Dermatomycosis Tonsurans. W. B. Reid.
20 A New Photographometer. John Milton Garrett.

Medical Record (N. Y.), Dec. 22.

21 *The Neuron Doctrine: Its Present Status. Charles L. Allen.
22 *A Few Remarks on the Use of Medullary Narcosis in Obstetrical Cases. Hugo Ehrenfest.
23 Perforation of a Typhoid Ulcer Without Fecal Extravasation; Operation Four Hours After the First Symptom; Recovery. E. G. Cutler and John W. Elliot.
24 *On the Treatment of Laryngeal Tuberculosis. Robert D. Cohn.
25 *Local Anesthesia in the Radical Operation for Inguinal Hernia. Leo B. Meyer.
26 Report of a Case of Fractured Liver. Seelye W. Little.
27 Fracture of the Clavicle, Resulting in Rupture of the Suprascapular Artery(?). H. T. Miller.
28 An Unusual Case of Nose-Bleed. G. W. Squires.
29 Dislocation of the Crystalline Lens in Immature Cataract. Norburne B. Jenkins.
30 An Epidemic of Typhoid Fever. Benjamin K. Hays.
31 The Removal of Thirty-five Screw Worms from the Nose. Hal Foster.

Medical News (N. Y.), Dec. 22.

32 *A Rapid and Simple Operation for Gall-Stones Found by Exploring the Abdomen in the Course of a Lower Abdominal Operation. Howard A. Kelly.
33 *Some Notes on the Treatment of Rheumatism. Alfred Stengel.
34 *Report of Two Cases of Sporadic or Family Trichinosis: With Remarks on the Importance of Eosinophilia in the Peripheral Circulation as an Aid to Diagnosis. Herman C. Gordinier.
35 *The Surgery of the Gasserian Ganglion. Wallace Neff.
36 The Treatment of Bronchitis in Infants and Young Children. Samuel S. Adams.
37 Fatal Angina Pectoris Without Lesions of the Coronary Arteries in a Young Man. T. E. Bullard and William Osler.

Cincinnati Lancet-Clinic, Dec. 22.

38 *Post-Mortem Examinations. W. D. Haines.
39 Brain, the Chief Organ of Mind. Brooks F. Beebe.

St. Louis Medical Review Dec. 8.

40 *Pathogenesis of Gall-Stones. Hugo Summa.
41 Paretic Dementia; Musculo-Spiral Palsy; Chorea Mollis. Charles G. Chaddock.

Medical Fortnightly (St. Louis), Dec. 10.

42 Medical Study in Berlin. Josephine Milligan.
43 *Post-Febrile Insanity and Its Treatment. Frank P. Norbury.
44 Diseases of the Stomach. (Continued.) J. M. G. Carter.
45 *Differential Leucocytosis. L. H. Warner.

Medical Age (Detroit, Mich.) Dec. 10.

46 Locomotor Ataxia: A Review of Some of the Recent Literature. H. R. Niles.
47 Professional Secrecy. Louis J. Rosenberg.

Virginia Medical Semi-Monthly (Richmond), Nov. 23.

48 *What Can Be Done to Enforce the New Medical Laws of Virginia. R. S. Martin.
49 Traumatic Popliteal Aneurysm. Hugh M. Taylor.
50 Some Remarks on the Use of Heroin in Phthisis, Bronchitis, Asthma, and Whooping-Cough. G. W. Mitchell.
51 Delayed Operations in Appendicitis. Joseph Price.
52 Treatment of Posterior Displacement of the Uterus. Stuart McGuire.
53 Remove the Special License Tax. J. Beverly Deshazo.

December 7.

54 *An Improved Appliance for the Treatment of Fracture of the Clavicle. J. W. Henson.
55 *Some Fallacies in Testing for Sugar in the Urine. M. D. Hoge, Jr.
56 *Drainage in Abdominal Surgery. J. W. Long.
57 Treatment of Compound Fractures. Southgate Leigh.
58 Surgical Indications in Purulent Ear Disease. A. D. McConachie.
59 The Rational Treatment of Hepatic Colic. H. Richardson.

Annals of Gynecology and Pediatry (Boston), December.

60 *Chronic Enlargement of the Spleen in Infancy. John Lovett Morse.
61 *Drainage in Abdominal Surgery. J. W. Long.

Cleveland Medical Journal, December.

62 A Case of Cretinism and Thyroid Extract. J. B. McGee.
63 Etiology of Appendicitis. Guy H. Fitzgerald.
64 Diagnosis of Appendicitis. Charles B. Parker.
65 The Prognosis of Appendicitis. Charles G. Foote.
66 Medical Treatment of Appendicitis. L. B. Tuckerman.
67 When Shall We Operate? Frank E. Bunts.
68 Operation in the Interval. N. Stone Scott.
69 Operation During the Attack. George W. Crile.

Brooklyn Medical Journal, December.

70 *Artificial Illumination. L. A. W. Alleman.
71 Historical and Critical Observations upon the Surgery of the Liver and Biliary Passages. George R. Fowler.
72 Abscess of the Liver. Walter C. Wood.
73 Tumors of the Liver. Russell S. Fowler.

Pennsylvania Medical Journal (Pittsburg), November.

74 Address in Obstetrics, Delivered at Medical Society of the State of Pennsylvania. Charles P. Noble.
75 Old-Time Treatment and Result of Typhoid Fever. W. H. Hartzell.
76 Lecturing Not Teaching. T. D. Davis.
77 Analogies Between Nervous and Electric Mechanisms. What is Nerve Force? J. Emmet O'Brien.
78 History of Typhoid Fever, with Statistics. James M. Anders.
79 Etiology of Typhoid Fever. Charles H. Miner.
80 Symptomatology and Diagnosis of Typhoid Fever. J. I. Johnston.
81 The Complications and Sequelæ of Typhoid Fever. H. A. Hare.
82 The Treatment of Typhoid Fever. Alfred Stengel.
83 Diet in Typhoid Fever. James Tyson.

Chicago Medical Recorder, December.

84 *Report on the Use of Nitrous Oxid as an Auxiliary to Ether and Chloroform Anesthesia. Fifty Cases. D. H. Galloway.
85 Skin Grafting. Edward H. Ochsner.
86 The Rational Treatment of Vesical Ulcer. F. Kreissl.
87 Abscess of Lung. Surgical Tuberculosis, Etc. Samuel L. Weber.
88 *New Points in the Anatomy, Histology and Pathology of the Rectum and Colon. J. Rawson Pennington.
89 *Case of Lupus Healed Under Treatment With Roentgen Rays. Wm. Allen Pusey.
90 Fracture of the Femur. W. A. Kuflewski.

Southern Medical Journal (La Grange, N. C.), November.

91 *Treatment of Compound Fractures. Southgate Leigh.
92 Report of Some Cases of La Grippe. J. W. P. Smithwick.
93 A Consideration of Some of the Conditions Due to an Excess of Uric Acid. J. W. P. Smithwick.

Journal of Nervous and Mental Diseases (N. Y.), December.

94 *A Case of So-Called Landry's Paralysis, with Autopsy. Sidney I. Schwab.
95 An Atypical Case of Multiple Sclerosis. Charles W. Burr and D. J. McCarthy.
96 *Note on the Occurrence of Multiple Neuritis and Beri-Beri in Alabama. E. D. Bondurant.

Ophthalmic Record (Chicago), December.

97 *The Effect of Converging Prisms on Our Notions of Size and Distance—An Experimental Study. Alexander Duane.
98 Listing's Plane and Listing's Law. Harold Wilson.

Medical Dial (Minneapolis), December.

99 On the Need of Sanatoria in the Treatment of Pulmonary Tuberculosis. J. H. Stuart.
100 An Unusual Accident in Intubation of the Larynx. H. A. Beaudoux.
101 The Physicians's Influence in re Vacation Schools. Helen C. Putnam.
102 Tobacco—Its Uses and Its Abuses. H. A. Minor.
103 One More Case of Apyretic Membranous Croup. A. E. Cordes.

Medical Bulletin (Philadelphia), December.

104 *Fracture of Elbow Joint—Sarcomatous Rectal Obstruction—Medullary Anesthesia. Ernest La Place.
105 Amyotrophic Lateral Sclerosis and Postero-Lateral Sclerosis. F. Savary Pearce.
106 The Treatment of Injuries and Deformities of the Bony Frame-Work of the Nose. E. B. Gleason.
107 Periosteal Tendon-Grafting in a Lisfranc Amputation for Gangrene. J. P. Mann.

Medical Council (Philadelphia), December.

108 Disorders of the Sexual Functions in Man. A. H. O. Leuf.
109 Clinical Cases from Practice in India. Interesting Cases of Multiple Scrofulous Glands; Guinea Worm; Ancient Multiple Dislocations; Leprosy; Insanity; Post-Partum Malarial Hemorrhage. Bertha T. Caldwell.
110 A Case of Central Pneumonia, Probably of Pythogenic Origin. John A. Robison.
111 Dilatation of the Cervix for Uncontrolled Vomiting. John E. Wilson.

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112 The Female Bladder. A. L. Russell.
113 Preliminary and Minor Railway Surgery. J. M. Salmon.
114 The Prepuce: What Shall We Do With It? E. K. Macomber.
115 The Treatment of the Lying-in Woman. E. L. Paulding.
116 A Case of Placenta Previa Without Hemorrhage. Harriet E. Garrison.
117 Treatment of Diseases of the Nose, Throat and Ear by the Family Physician. E. B. Gleason.
118 Gonorrhea and Marriage. C. C. Mapes.

Archives of Pediatrics (N. Y.), December.

119 *Fetal and Infantile Typhoid. John Lovett Morse.
120 *Pulmonary Tuberculosis in Infants and Children. Frank Parsons Norbury.
121 *A Report of One Hundred and Eighty-seven Cases of Measles With Reference to Koplik's Spots and Their Value in Diagnosis. John J. Cotter.
122 *Poisoning by Vapo-Cresolene. S. S. Adams.
123 Fatal Intestinal Hemorrhage Without Known Cause in an Infant of Five Months. Maurice Ostheimer.

International Journal of Surgery (N. Y.), December.

124 The World's Debt to Surgery. Henry W. Roby.
125 The Technique of Surgical Gynecology. (Continued.) Augustin H. Goelet.
126 Asepsis and Antisepsis. James E. Davis.
127 Simple Operation for Hemorrhoids—Enucleation. J. Rawson Pennington.
128 Regional Minor Surgery. (Continued.) George G. Van Schaick.
129 Some Surgical Methods in the Treatment of Gall-Stones, with Cases. Beverly MacMonagle.
130 Local Treatment of the Genito-Urinary Mucous Membrane. Jacob R. Johns.

Colorado Medical Journal (Denver), November.

131 *Ligature of the Innominate for Aneurysm of Right Common Carotid and Subclavian. Albert L. Bennett.
132 *Pulmonary Embolism, With Report of Cases. F. E. Waxham.
133 *The Use of Creosotal in the Treatment of Acute Lobar Pneumonia. B. B. Frankle.
134 *Some Pathological Conditions Characterized by the Presence of the Yeast Fungus. Clinton G. Hickey.
135 Variola, Smallpox. W. W. Woodring.

Denver Medical Times, December.

136 *Diagnosis of Stone in the Kidney. H. D. Niles.
137 *Compound Fractures of the Lower Jaw, Clavicle and Frontal Region. J. F. Spelman.
138 Shall the Family Physician do Refraction? John A. Donovan.
139 Variola—Smallpox. W. W. Woodring.
140 Clinical Significance of Tremor. S. D. Hopkins.

Peoria Medical Journal, December.

141 The Diagnosis of Surgical Diseases of the Kidneys. James E. Coleman.
142 The Local Medical Society. J. M. McClanahan.

Kansas City Medical Index-Lancet, December.

143 The Principles of Diagnosis of Lesions of the Brain. John Punton.
144 Charity Organization. B. E. Shawhan.
145 Proprietaries and Prescription Writing. S. H. Blakely.
146 Two Fracture Cases With Medicolegal Aspects. George A. Boyle.

Hot Springs Medical Journal, November.

147 *The Philosophy of the Science and Art of Medicine. W. F. Barclay.

Texas Medical News (Austin) November.

148 Hyperchlorhydria. T. J. Bennett.
149 Microscopic Technique in Relation to the Diagnosis of Urethritis. William F. Bernhart.
150 The Treatment of Fractures of the Clavicle. G. M. Hackler.
151 The Report of a Case of Mastoid Disease. Edgar D. Capps.

Columbus Medical Journal, November.

152 *The Use and Place of Caustics in the Treatment of Malignant Diseases. S. B. McGavran.
153 Treatment of Simple Chronic Catarrh of the Nose. Daniel A. Berndt.
154 General Paralysis of the Insane. George Stockton.
155 The Specialist and the General Practitioner. George M. Clouse.
156 *Traumatic Injuries of the Cranium and Insanity. E. G. Carpenter.

Memphis Medical Monthly, December.

157 Occupation Neuroses. B. F. Turner.
158 Report of a Case of Diffuse Scleroderma. S. Smith Terrill.
159 Three Cases of Intestinal Surgery. E. A. Neely.
160 Scalp and Skull Injuries. Jere L. Crook.
161 Some Interesting Cases Occurring in General Practice. G. H. Wood.
162 The Care of the Perineum During and After Labor. Alfred Moore.

Atlanta Journal-Record of Medicine, December.

163 The Treatment of Osteo-Arthritis and Rheumatoid Arthritis of the Feet, Knees and Spine. Michael Hoke.
164 The Physiological Therapeutics of the Borderland of Insanity. C. A. F. Lindorme.
165 *Excision of the External Carotid Artery in Cases of Inoperable Malignant Diseases of the Face. William P. Nicholson.

Texas Medical Journal (Austin), December.

166 Modern Medical Training. H. P. Cooke.
167 General Medicine. J. H. Joyce.
168 Report of Chairman of Section on Obstetrics and Gynecology, Central Texas Medical Association. A. R. Kuykendall.
169 The Preparation of the Lying-in Patient and the Management of Normal Labor. J. H. Alexander.

Medical Times (N. Y.), December.

170 The Value of Antiseptic Nebulæ in Pulmonary Tuberculosis. Homer M. Thomas.
171 The Treatment of Bronchopneumonia. William Fitch Cheney.
172 Hysterical Temperature. W. F. Boggess.
173 A Case of Acquired Cretinism Treated With Thyroid Extract. Herbert W. Foster.

AMERICAN.

1. **Supracondyloid Fracture of the Humerus.**—The prognosis of these fractures heretofore has been bad as regards motion of the joint, and Shands gives his views on the improved methods of treatment. The most important point is knowledge of the position of the fragments, and the X-ray offers us this. His method is to drill holes through the fragments and suture them in position with kangaroo tendon, excepting in cases where the fracture is oblique, where he uses a drill long enough to project through the dressing, until the end of the second week, perfect asepsis being employed. His experience and observation convinced him that this method is the correct one and the sooner it is generally adopted the fewer stiff and deformed elbows we shall meet with. He reports three cases, illustrated by skiagrams.

3. **Kyphosis.**—The apparatus here described by Forbes is practically a lever whose lower extremity is the fulcrum and upper extremity the power, but the resistance is at the kyphosis. This can be made to exert pressure at the fulcrum or at the point of kyphosis and thus tend to draw the diseased bodies of the vertebræ apart and extend the whole vertebral column above that point, transferring the superimposed weight of the bodies to the transverse processes of the vertebræ and thus reduce the kyphosis. In addition it will perfectly immobilize the vertebral column and by preventing attrition place the parts in the most favorable position for the arrest of the diseased process. The methods of its employment are given and the author states in detail what he considers to be its advantages.

4. **Recrudescing Angina.**—From a study of several cases, together with those he has found in the literature, Mayer arrives at the following conclusions: 1. That anginas due to the bacillus of Friedländer may exist in a subacute or chronic form. 2. They occasion no distress, except perhaps in the beginning of the membranous deposit. 3. They may appear in membranous form, exfoliating and recurring. 4. In the chronic form treatment seems to be of no avail, the bacilli eventually becoming much less active, and the condition ceases by limitation. 5. They are probably much more frequent than the few recorded cases seem to indicate.

5. **Intraspinal Cocainization.**—Goldan reports experience and operations of this method from the standpoint of the anesthetist. He thinks more fluid, if anything, is injected than is lost by the puncture. He sees no special advantage in obstetrics over chloroform, and thinks that it has been used needlessly in many minor cases. He notices inconvenient effects and warns against puncture of the spinal cord, which he thinks may be dangerous, and an accident of this sort should be carefully avoided. The symptom of shock is very pronounced in these cases and its intensity can only be compared with profound chloroformization. He sees no advantage in the matter of speed in the operation, and many disadvantages, and asks in conclusion whether the use of the method may not be a step backward rather than forward.

6. **Empyema in Children.**—Wachenheim reviews the special signs of this condition in children, the chronicity, the temperature curve, rapid feeble pulse, percussion and ausculta-

tion signs, and remarks that the ordinary physical methods are more or less unreliable in young children and we never can feel certain of our diagnosis after employing them alone. The most important recourse is exploratory puncture, and he considers the risks of this very slight. The danger of puncture of the lung is, he believes, imaginary.

8. **Uterine Fibroids.**—The questions specially noticed by Richardson are: Need of thorough preliminary examination; the condition of the kidneys; difficulties of palpation upon a conscious patient; the importance of vaginal examination before operating, which can be made aseptic if care is taken; the element of time in the operation and the need of speed and yet caution; avoidance of anything like carelessness or undue speed where caution is required; the recognition of the intestines and other organs; the condition of the ureters, the choice of operation between hysterectomy and myomectomy with special reference to the future of the patient. The technique of the operation of myomectomy is described too fully to be here reproduced.

9. **Hot-Water Immersion in Puerperal Eclampsia.**—The general principles on which eclampsia should be treated are attention to the conditions of toxemia, maintenance of stable nervous equilibrium, due elimination by other organs as well as kidneys, and Green advises an exclusive milk diet when the kidney is at fault, diaphoresis and cutaneous stimulation by heat. The hot-air bath is most appropriately used in the treatment of actual eclampsia, as the patient is then comatose and unable to help herself, and hot-water immersion is impracticable. The hot-water pack is often effective, but when circumstances permit, the hot-water immersion bath is most satisfactory. It not only causes profuse diaphoresis and reduces blood tension, but is a nervous sedative itself. The water should be as warm as can be borne. The patient should remain in it until profuse perspiration of the face shows that the sweat glands are in full activity, and friction with the flesh brush is also advisable. When free perspiration has been induced the patient should be rolled in a blanket, placed in a warm bed and covered with several blankets, and perhaps a rubber sheet. It should be remembered, however, that a hot bath is a powerful agent in the induction of labor. It should not be used unless labor is imminent. There should be an ample ingestion of liquids with free diaphoresis. The paper concludes with a report of three cases of this treatment with benefit.

10. **Diphtheria Antitoxin.**—McCollom's article shows the effect of the antitoxin treatment in several cities, the ratio of morbidity from diphtheria in Boston and the percentage of mortality by age in London and in Boston. His conclusions from the observations of nearly 8000 cases are as follows: 1. That the ratio of mortality of diphtheria per 10,000 of the living was very high in Boston previous to 1895. 2. That the ratio of mortality per 10,000 has been very materially reduced since the introduction of antitoxin. 3. That the percentage of mortality in the South department is lower than that of any of the hospitals taken for comparison. 4. That since larger doses of antitoxin have been given the death-rate has been materially reduced, this reduction having occurred in the apparently moribund cases. 5. That no injurious effect has followed the use of the serum. 6. That to arrive at the most satisfactory results in the treatment of diphtheria, antitoxin should be given at the earliest possible moment in the course of the disease.

12. **Calculi.**—Leonard argues for the Roentgen rays in detecting calculi, especially in the kidneys, ureters and bladder, and while detection of vesical calculus is generally easy by the ordinary methods, there are applications of this method that are especially useful. He thinks that the perfection of the technique will render this method still more valuable in diagnosis.

14. **Zoologic Names.**—The use and abuse of zoological names by physicians are dwelt upon by Stiles, who, while he does not claim that all physicians should be familiar with the rules of zoological nomenclature, believes that they generally take too many liberties with it; for example, the hydatid echinococcus is suffering from not less than sixty names, and the unarmed tapeworm has about forty names. He protests also against the changing of the spelling of zoological terms. This may seem trifling to the physician, but it is of importance for scientific accuracy when speaking of zoological subjects. For example, tænia may be another animal from tenia, and tinea is zoologically a moth and not a parasitic worm, nor is there any possible zoologic ground for the use of the term ameba. He concludes his paper with the following thesis: It is incumbent upon physicians to follow zoological customs in dealing with zoological subjects, as it is incumbent upon zoologists to govern themselves by the code of medical ethics in dealing with medical cases.

21. **The Neuron Doctrine.**—Allen concludes his article with the general statement of the findings of Golgi's method and the very apparent separation of the neuron units one from another. He says it seems to be no more proved that the Golgi and methylene-blue methods give deceptive results than do those of Apathy and Bethe, which have not had anything like so wide an application as the former, and more extended observations are required before we can throw overboard so favorable a hypothesis as the neuron doctrine. There is a great deal of difference as to just what the neuron means among authorities, and there are many who have not admitted an entire lack of continuity between the elements. Then if we should admit Apathy's view to be correct, it is not necessary for us to abandon the neuron. Its embryology is not affected. It may be necessary to modify our views somewhat, but the conception as a whole as a means of explaining certain facts is hardly to be given up.

22. **Medullary Narcosis in Obstetrics.**—Ehrenfest, after reviewing authorities, thinks that there is a possible future for the operation. If, however, we should be obliged to use instrumental delivery more often with it, it would seem a possible contraindication. As a substitute for other forms of narcosis it may be of value; if future work establishes the fact that these subarachnoidean injections are free from danger they may add some advantages in cases where heart failure, nephritis, etc., contraindicate the use of chloroform or ether. On the whole, however, it seems to be more than doubtful whether we are justified in recommending it as a substitute for light chloroform narcosis; the latter is always sufficient in the usual run of cases.

24. **Laryngeal Tuberculosis.**—Cohn would divide laryngeal tuberculosis into three stages: 1. Excepting circumscript infiltration or ulceration, the larynx is healthy. In this stage the treatment consists in curettage if infiltration be present and in cauterization with lactic acid if ulcer exists. If the general condition including the lungs be good, these procedures are imperative, and must be repeated at intervals of one to three weeks until the diseased tissue is completely removed. In the second stage, where extensive infiltration or ulceration exists we can not expect a complete cure and our main aim is to prevent secondary infection. The mildest method is by means of antiseptic inhalation; whether we use 1 to 3 per cent. carbolic acid, 2 to 4 per cent. boracic acid, or 1 to 2 per cent. lysol, is of no consequence. If the epiglottis permit an inspection of the larynx, the antiseptic swab is still better and a 10 to 30 per cent. solution of menthol in olive oil. If we see the case in its last pitiful stage all we can do is to treat it symptomatically. Administer a morphin powder before each meal, or better still, apply a 20 per cent. solution of cocain to the pharynx. In impending suffocation, tracheotomy, of course, is necessary. The general treatment corresponds closely to that of tuberculosis.

25. **Local Anesthesia in Hernia.**—Meyer thinks the advantages of this method of operating are slight as compared with the pain and discomfort produced. He does not wish to be understood as unqualifiedly condemning it, but wants to define its limitations. Its only real advantage is the removal of the element of danger of general anesthesia, and that very seriously limits its employment.

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32. **Gall-Stones.**—The operation, here described by Kelly, is feeling for the gall-bladder through the lower incision of the abdomen, pressing out its contents and, if the stone is present, pressing it up against the abdominal wall and cutting down on it. The gall-bladder is drawn well up to the peritoneal incision and there is no danger of contamination with the bile. The pressure holds the tissues from below and keeps them anemic, and the skin, fat and muscle are separately divided. The peritoneum is easily recognized, and on reaching this layer a little nick is made and the two edges caught with mosquito forceps; as the peritoneal incision is made a little larger, the gall-bladder with the stone appears in the incision, is opened and its edges caught, as the incision is made large enough to evacuate its contents. The edges of the gall-bladder after the removal of the stone are united with fine silk sutures while held up by four of Halsted's delicate mosquito forceps, the suture beginning at one end of the incision and continuing to the other embracing all the coats but the mucosa. The same suture is then continued back to the starting-point as a quilted suture, burying the first layer when the ends are tied together. If the gall-bladder is normal he does not hesitate to drop it without a drain, but if it is diseased he closes with an interrupted suture and inserts a small drain provisionally. The abdominal wound is then closed and the operation complet within a few minutes of its commencement. Several cases are reported operated on in this manner, showing its advantages.

33. **Rheumatism.**—Stengel remarks, after studying the bacteriologic nature of rheumatism, that it is important to recognize several fundamental facts as regards treatment: 1, the tendency in many cases towards spontaneous recovery; 2, complications, such as endocarditis, pleurisy, pericarditis, etc., are frequent and more likely to occur in protracted cases than in those of short duration; 3, the complications are probably, as a rule, secondary to joint disease and not to the infective lesion—such as tonsillitis—that was the primary focus, consequently the severity of the local joint lesion bears a relation to the likelihood of the development of the complications. He states these facts as probable, not as absolutely proved. Of the drugs used in the treatment of rheumatism, the salicylates hold the first place, and if they are not specific in their action they at least relieve pain. He also mentions as another valuable method, fixation by splints of plaster, which he thinks is often the best method of producing rest for the parts. He has used the plaster cast considerably in gonorrheal and polyarticular types and thinks its beneficial effects are immediate. In polyarticular rheumatism it has been most useful when the knee, elbow and ankles have been affected. The wrists and smaller bones can be managed with splints and in other ways quite as satisfactorily. In some cases of rheumatism, where rebellious to treatment with the salicylates and rest and the general condition is unsatisfactory, tonics are advisable, and in a number of cases of this sort he has employed small doses of bichlorid of mercury with good result and attributes this to the tonic influence of the drug. It seems to be of value as a stimulant of hemogenesis or as a tonic, not as an antiseptic. Other tonics may be of use, such as iron; strychnia and the iodids are of undoubted value in some chronic cases. In conclusion, he mentions the serum treatment, and he has made a few trials of antistreptococcic serum in cases of obstinate rheumatism in which improvement soon followed the injection. The dose was one-third the customary amount employed in streptococcic infection and the remedy was administered every other day for a week or more, when ordinary treatment was resumed. While conclusions would be rash from this limited experience, he thinks the method deserves further trial.

34.—See abstract in THE JOURNAL, XXXV, p. 1105.

35. **Surgery of the Gasserian Ganglion.**—Neff notices the history of the operations on the Gasserian ganglion and the methods, and concludes his article as follows: 1. Trigeminal neuralgia is an ascending neuritis, peripheral in origin. The second and third branches, rather than the first, are the ones most likely to be involved. 2. If the disease persists after several months' trial with drugs, electricity, etc., surgical intervention is indicated. 3. If only one branch is involved and the disease is not of long standing, as much as possible of the affected branch should be removed with a view of relieving pain and preventing the upward progress of the disease. 4. If more than one branch is involved, and the pain is severe and has persisted for a long time, the ganglion should be extirpated, all other means having failed. 5. The temporal route should be followed, the Hartley-Krause, or preferably, Cushing's modification of it, being the most rational procedure. 6. Pain will not recur with original severity in more than 1 or 2 per cent. of the cases operated on, or in any degree in more than 4 or 5 per cent., and is invariably due to an incomplete operation. 7. It is important to remove the ganglion and its branches intact in order to be certain of the completeness of the operation and to insure a careful and thorough microscopic examination of the specimen. 8. The present mortality is about 10 per cent. Increased experience and an improved technique will undoubtedly diminish this mortality, and dissipate the risks of this hitherto most formidable, difficult and dangerous operation.

38. **Post Mortem Examinations.**—The paper by Haines insists on the importance of thorough work in the post-mortem; we must look always for everything that exists. He notices particularly the staining of the body as indicating the positions in which it has laid, as it often happens that the body has been removed before seen by the physician. The subjects of atheromatous change are especially prone to early, rapid and extensive post-mortem staining and he attaches great value to this, and mentions cases to show that it may appear even before death. Other points mentioned are the conditions of the mucous membrane of the mouth, which are of value but sometimes deceptive, post-mortem rigidity, insufflation of lungs, post-mortem vesicles, and the need of examining the pharynx and larynx for obstruction. He says the post-mortem room is the sarcophagus of snap diagnoses, the abode of disappointed expectations, but a Mecca to him who will improve his knowledge.

40. **Pathogenesis of Gall-Stones.**—Summa offers the following conclusions of his article: 1. The causation of gall-stones is a very manifold one. The sooner we abandon the natural desire to search for an etiology common to all gall-stones the sooner we shall approach the truth. 2. The formation of gall-stones requires a union of at least two factors. 3. Notwithstanding all the efforts made thus far, there are still a number of etiologic factors unknown to us. 4. Our knowledge of the chemical changes in the bile and of the anatomic changes in the gall-bladder in various, particularly febrile, diseases should be enlarged. 5. One, and surely a very important, group of gall-stones is apparently due to the combined effect of temporary impediments in the outflow of bile and lithogenic catarrh of the biliary system. The chief material of these gall-stones, cholesterin and lime salts, is not derived from the bile, but from the destruction of the epithelial cells of the mucosa. 6. Such gall-stones deserve their name "gall-stone" only on account of the locality they are found in. 7. Upon the common sense the question forces itself, why do the same factors, temporary stasis and lithogenic catarrh in other places, as, for instance, salivary ducts, pancreas, pelvis of kidney and urinary bladder, not form similarly composed stones? He leaves the answer of this question to the unconditional admirers of Naunyn's theory.

43.—This article has appeared elsewhere. See THE JOURNAL, XXXV, p. 204.

45.—See abstract in THE JOURNAL, XXXV, p. 1050.

48. **Virginia Medical Laws.**—Martin discusses the medical laws of Virginia as compared with those of other states in relation to the question of reciprocity. He thinks the law is not sufficiently enforced, and he wrote a series of inquiries which he sent out to examining boards of twenty-five different states, and gives briefly the substance of these replies. In North Carolina there is no trouble apparently in having medical laws enforced. The profession and the laity alike are interested in their enforcement. In South Carolina the reverse is the case. In Kentucky, Colorado, New York, New Hamp-

shire and Wisconsin the enforcement of law seems to be fairly easy and thorough. In West Virginia, Maryland, Pennsylvania, Connecticut, Massachusetts, Tennessee, Indiana, Mississippi, and to some extent in Iowa, there has been more or less difficulty, due either to popular and professional apathy on the subject or to the vagaries of the courts in regard to irregular pretenders in medicine. In some of these states, however, the condition is improving. In Virginia he finds that they do have trouble and the difficulty is largely in securing prosecution of irregular practitioners and in the coöperation of the profession. There are some men who fail before the board and go home and practice, and there is another class who never take the trouble to appear. The examining board of Virginia is undoubtedly thorough and fair in its methods, but with these conditions its functions are seriously limited. He thinks the profession needs to see to not only the enforcement of the present law, but as to possible legislation which may impair it.

54. **Fractured Clavicle.**—Henson describes an appliance rather too elaborate in its details to be reproduced here, which he claims renders the parts immobile and uses the scapula as a factor in the management of the outer fragment better than other methods heretofore in use. It is perfectly comfortable and never slips or gets displaced without interference on the part of the patient.

55. **Tests for Urine.**—Hoge mentions certain past fallacies in the ordinary test for sugar, such as the use of chloral or the excess of creatinin in the urine, both of which will reduce copper and give the same reducing color. Urobilin also, when in excess, will reduce copper. In the Moore or Heller test a small quantity of sugar, less than one grain per ounce, is not detected, and if the patient is taking rhubarb or senna the urine will give a dark-brown color or cast. Certain substances in the urine, such as urea, urates, uric acid, creatinin, indican, urobilin and arsenic, tannic acid, carbolic acid, gallic acid, camphor, copaiba, salicylates, turpentine, glycerin and some alkaloids when administered internally will produce more or less reduction of copper. The objections to the Bottger test are due to the presence of albumin, pigmentation, mucin and other substances containing sulphur, which need first to be removed. Roberts' fermentation test is the surest and freest from error. The only objection to it is the length of time required. He gives the tests for creatinin, urobilin and indican.

56.—See abstract in THE JOURNAL, XXXV, p. 1425.

60. **Splenic Enlargement in Infancy.**—Acute splenic tumor occurs in infants, as in adults, in connection with acute infectious disease, and the enlargement is proportionately greater than in later life. Splenic tumor is much more common in infancy, occurring not only under the same conditions as in adults, but in many others. Not only do we have it in combination with leukemia, liver cirrhosis and malaria, all rare in children, excepting the latter, but especially in connection with rickets and hereditary syphilis. Both of these are frequently associated with anemia, and cases are reported illustrating these facts. The enlarged spleens in children reported by Morse are of interest. They disappear rapidly with improvement of the condition. His experience with hereditary syphilis has not been sufficient to warrant any conclusions, but he thinks it also disappears in this condition under treatment.

61.—See abstract in THE JOURNAL, XXXV, p. 1425.

70. **Artificial Illumination.**—The various methods of lighting are described and criticised by Alleman, who finds that the present methods are very unsatisfactory and the arc light the worst of all. He suggests as an improvement the concealment of the light itself and its reflection on the ceiling of the room, thus producing a diffusion which simulates, as far as possible, the diffusion of daylight. If it is possible to sufficiently light the room in this way, reading can be done in all parts with less fatigue and damage to the sight. He thinks that when a single light is used for reading purposes the best plan is the use of a translucent shade. An insufficient reading light is less harmful than the extreme contrast of a bright light in a dark room.

84. **Nitrous Oxid Anesthesia.**—Galloway reports the results of fifty cases of the combined use of nitrous oxid and ether, the former being used as a preliminary in the anesthesia. He thinks the advantages of the method entitle it to more extended use. They are: 1. That they give rise in the majority of patients to no unpleasant sensations. 2. Time required to produce unconsciousness is 50 to 60 seconds in the majority of cases and the patient is ready for the operation in two to three minutes. 3. It requires less ether by from 2 to 4 ounces. 4. Recovery is more rapid after operation, on account of the smaller quantity of ether required. Nitrous oxid alone may be used for short operations. In very few of these cases does it produce any alarming cyanosis, and with care these symptoms, should they occur, will not be serious.

88. **Rectal Valves.**—This paper of Pennington covers in part the same subject as that of his article published in THE JOURNAL XXV, p. 1520.

89.—See THE JOURNAL, XXXV, p. 1476.

91. **Compound Fractures.**—Leigh emphasizes the following points in the treatment of compound fractures: 1, free opening of the wound; 2, removal of all useless torn tissues; 3, thorough disinfection; 4, good coaptation of bones; 5, loose closing of wound; 6, firm pressure dressing; 7, constitutional treatment. He believes that attention to these points, together with good nourishing food and plenty of it and plenty of fresh water, mild cathartics, and the use of lime, which he has given in the form of syrup lactophosphate of lime, to replace the bone cells, will give good results.

94. **Landry's Paralysis.**—Schwab reports a case of Landry's paralysis with post-mortem in which the nerve cells were found normal, or at least the slight variations can be explained by pre-agonal or post-mortem chromatolysis. There was an absence of degeneration in the cord, and of neuritis; there was no myelitic process of softening or purulent inflammation and no meningitis. The positive findings were limited to the blood-vessels and the perivascular lymph-spaces alone, and consisted in a tremendous vascular congestion, thinning of the vessel walls due to this increased pressure, and hemorrhage with escape of free blood into the nervous structure, and possible increase in the number of vessels. There were no inflammatory products and no demonstrable disease of the vessel walls other than the thinning mentioned. Schwab suggests that possibly these hemorrhages are artefacts due to mechanical obstruction of over-full vessels while making sections, but against this is the fact that some of them show evidence of long duration and the hemorrhages are too frequent, and occur independent of the plane in which the sections were cut. There are two theories, both of which only partially account for the symptoms and neither is satisfactory. According to the first, the symptoms might be due to the effect of pressure of the free blood on the nervous structure. The number of the hemorrhages and their distribution favor this idea as well as does their prevalence in the upper portion of the cord, but against it are the great number of hemorrhages of recent date and the absence of the effect of old hemorrhages, such as fibrin, blood crystals, pigmentation, etc. The second theory is that a toxic process produces in the cord a condition very similar to that of non-purulent encephalitis affecting the nerve-cells of the anterior horns, but in such a minute way that their morphologic appearance could not be regarded as differing from the normal. In other words they were functionally affected. The absence of neuritis or degeneration would appear to strengthen this view, and the fever and constitutional symptoms can also be explained by it. The origin of the toxic process he traces possibly to old tubercular foci in the lungs. While not doubting the possibility of the parenchymatous nature of the process in certain other cases, in his he holds the preliminary change must have been an interstitial one. His view is that Landry's paralysis is not a distinct clinical type, but that it is an ascending paralysis comprising a group of symptoms depending on the most varied causes and with the most varied pathology, so that the name is only of clinically descriptive value.

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96. **Beri-Beri.**—Bondurant first alludes to the epidemic of beri-beri that occurred several years ago in the State Insane Hospital of Alabama, and a similar one that occurred in 1895 in the Arkansas State Hospital at Little Rock. He has inquired among practitioners to find out whether the disease has been observed in other communities, but satisfactory evidence appears to be lacking, the cases being generally alcoholic, post-typhoid, multiple neuritis, etc. Multiple neuritis in the form of beri-beri, however, is very common in Mobile among the sailors in ships touching at that port; the Norwegian sailors seem specially affected and the port is dreaded on that account. It is noteworthy, however, that the disease is unknown among the local inhabitants and that it occurs in vessels that have been previously infected.

97. **Converging Prisms.**—Duane reports experiments on the effect on the vision of the converging prisms, especially as regards the notions of size and distance, and from it finds that in the great majority of cases—23 out of 28—the effect of converging prisms was to make the distant object appear either smaller or more remote, both in 17 cases, in 2 smaller, but not more distant, in 4 more distant, but not smaller; 2 of these last, however, were only examined with homatropin. Both apparent recession and apparent diminution increased *pari passu* with the amount of convergence. In some the recession appeared to be the primary effect, noticeable even with prisms too weak to produce any diminution in the size of the object, and in all more marked than the diminution. In other cases the diminution was primary and in only one instance, and that a dubious one, was the distant object alleged to look nearer, and in no instance was it reported as appearing larger, though there was an apparent exception in this which was corrected by further investigation. In a few cases in which there was no effect produced on the apparent size or diminution of the object across the room the amount of convergence employed was usually small, and analogy with other cases would lead us to suppose that with stronger prisms a decided effect would be produced both upon the size and distance. The effect on the apparent size and distance of objects seen through the converging prisms was less pronounced in those who from the start used little accommodation. On the other hand, the converging seemed marked to those whose sight at first was blurred by the excessive accommodation employed and cleared up afterward through relaxation of accommodation. Objects, as soon as they became distinct by relaxation of accommodation, appeared small and distant. The addition of a concave glass clearing up the sight that was blurred by the overplus of accommodation, had no effect on the apparent size and distance produced by the prisms. The effect of homatropin pushed to the point of complete relaxation of accommodation was in some cases to make the object appear farther off, but no smaller. In one case it apparently prevented the recession and diminution that had existed before. In 2 cases recession and diminution were marked both with and without homatropin. In 14 cases out of the 16 examined, the effect of looking through converging prisms at an object near by—18 to 30 inches—was to make it appear smaller, even with a very weak prism. The diminution of size was more marked than that of distance. Near objects generally looked more remote, though sometimes they looked nearer than they really were. With strong prisms the recession may be very pronounced. In all of the 6 cases examined under homatropin the near object looked either farther off or smaller, or both, and the effect was usually decided. The explanation of these facts, Duane remarks, is rather difficult, though the indications are that the accommodation, or the relaxation of an unnaturally tense accommodation, is the prominent factor in their production. He is inclined to think this disturbance of normal relations between the accommodation and convergence brought about by the use of converging prisms is chiefly responsible for the diminution in size that most persons see in this way. The relaxation that is also noticed seems apparently due to the same cause, but is considerably influenced by the effects of contrast and perspective. The psychic element must not be ignored, and accurate description is not possible to every one.

104. **Medullary Anesthesia.**—La Place reports, with other cases, one of fracture of the elbow-joint, one of spontaneous resolution of a sarcomatous tumor, and two cases in which medullary anesthesia was employed. In one, an aged man, 2 c.c. were employed. Anesthesia extended to the nipples in thirteen minutes. In the other case, however, twelve different attempts were made to reach the spinal cord with the needle and in no instance was it possible to extract any cerebrospinal fluid. There was no difficulty in introducing the needle, but there seemed to be an anomaly in the patient in this regard, nothing but blood could be withdrawn. He thinks possibly there was an obliteration of the sac in that region, due to old syphilitic infection. The patient was subsequently operated on with ether. The case is of interest on account of the failure to reach the subarachnoid space.

119. **Fetal and Infantile Typhoid.**—The possibility of fetal typhoid is discussed by Morse, who reviews the literature of the subject and sums up in the following: 1. The typhoid bacillus can traverse the abnormal, and possibly the normal, placenta from mother to fetus. Other organisms may also pass in the same way. 2. Infection of the fetus results. Because of the direct entrance of the bacilli into the circulation intrauterine typhoid is from the first a general septicemia. For this reason, and possibly also because the intestines are not functionating, the classical lesions of intrauterine typhoid are wanting. 3. The fetus usually dies in utero, or at birth, as the result of the typhoid infection. 4. It may be born alive, but feeble and suffering from the infection. If so, death occurs in a few days without definite symptoms. 5. It is possible that the fetus may pass through the infection in utero and be born alive and well. There is, however, no proof that this happens. 6. Infection does not always occur. The pregnant woman does not necessarily transmit the disease to her child. As regards infantile typhoid, that is, typhoid occurring under 2 years, he sees no reason why it does not occur; the probability should be greater the second year than the first. Nevertheless the statistics show that this is very rare or is unrecognized when it occurs. To demonstrate if possible whether typhoid really exists or is confused with gastrointestinal disorders of infancy Thayer and he examined the blood of 50 cases for serum reaction, in the summer of 1898, and in only one obtained a positive reaction. While the series is too small for definite conclusions, it supports the theory of the rarity of infantile typhoid. He goes over the literature of this subject also and offers the following conclusions: Except for the lessened exposure in the first year through food, there seems no obvious reason why typhoid should be less frequent in infancy than in later life. Nevertheless, judging from the small number of cases reported, it is less frequent. It may be really less frequent or only apparently so because the disease is not recognized, being mistaken for other conditions. Bacteriologic examinations in a large series of autopsies on infants and the use of the Widal serum test in a large number of sick babies seem to offer the best means for determining both the frequency and the character of the disease at this age. The accuracy of the diagnosis in many of the earlier reported cases must be regarded as very doubtful, and hence no satisfactory conclusions can be drawn from them. Analyses of the more recent and certain cases seem to show that the symptoms of infantile typhoid are essentially the same as in adults, but that the course is shorter and the mortality greater. These conclusions may be inaccurate, however, as it is possible that they are based on the severe cases alone, the milder cases having escaped notice. The pathologic changes in the intestines are, as a rule, insignificant. The contrast between them and the severity of the general symptoms is striking. The probable explanation is that in the infant, as in the fetus, but to a less degree, the disease is a general rather than a local infection. As regards the serum reaction, he thinks that it occurs in the infant as in the adult. There are no data available regarding its presence or absence in fetal typhoid. As regards transmission through the placenta, he reviews the literature and finds that the agglutinating principle may be transmitted in some cases and in most, not at all. The simple explanation of its not

occurring is that the placenta acting as a filter prevents the passage of the agglutinating principle, but the data are insufficient as yet to prove any theories. The transmission of the agglutinating principle through the milk is also discussed, and his general conclusions on the subject of serum reaction are as follows: The serum reaction occurs in infantile as in adult typhoid. There are no data as to whether or not it occurs in fetal typhoid. The agglutinating power may or may not be present in the blood of infants born of women with typhoid. If present, it is transmitted from the mother to the child through the placenta. It is possible, however, that it may be formed in the child in response to toxins transmitted through the placenta. The agglutinating principle can pass through the normal placenta. Part of it, however, is arrested in the passage. Whether or not it is transmitted seems to depend on the strength of the agglutinating power in the maternal blood and in the length of time during which the placenta is exposed to it. It may be transmitted to the nursling through the milk. It may appear in the infant's blood in less than twenty-four hours. The weakening of agglutinating power is due to the obstruction to its passage in the mammary gland and in the nursling's digestive tract. The chief factor governing transmission is the intensity of the power in the maternal blood. A subordinate but important factor is some unknown condition in the digestive tract. If the power in the maternal blood is weak and the obstacles great it may not be transmitted.

120.—See abstract in THE JOURNAL, XXXV, p. 1049.

121. **Measles.**—Cotter has investigated an epidemic of measles, including 187 cases, to ascertain the following points regarding the presence or absence of Koplik's spots: 1, whether they appear regularly; 2, whether they appear before other pronounced diagnostic signs; 3, to estimate their value in diagnosis. He found positive occurrence of spots in 169 cases, negative in 8 and doubtful in 10. Their absence was observed in poorly nourished children of the marantic or rickety type, or with the taint of hereditary or acquired syphilis. A very small percentage of otherwise healthy children did not show the Koplik spots at any stage of the disease. Two of the 8 were of this character. As regards the time of appearance they occurred with fever and skin eruptions in 78 cases. They appeared one day before the skin eruption in 54, two days before in 25, three days in 4, four days in 3 and five days in one and in 2 cases one day after the eruption. In one case also they appeared with no skin eruption. He is inclined to think from his observations that when measles reaches the stage of appearance of this symptom exposure to other children has been great, but he admits their extreme value as a diagnostic point and knows of no other disease than measles that presents them.

122. **Vapo-Cresolene.**—Adams reports two cases of poisoning from inhalation of the fumes of a vapo-cresolene lamp and reports these because this disinfectant is often used where there is a child that has a cough, and frequently, he thinks, with great risk to it.

131. **Ligature of Innominate.**—Bennett reports an additional case to the twenty-nine already published, of which he gives a summary. His operation was made in the French Congo territory on a native, and the results seemed to be good until the third day, when secondary hemorrhage occurred, carrying the patient off.

132.—See abstract in THE JOURNAL XXXV, p. 448.

133. **Creosotal.**—Frankle has found in a few cases of acute lobar pneumonia, creosotal, which is simply a fanciful name for pure and modified forms of creosote carbonate, containing 92 per cent. of creosote, to give apparently valuable results. The cases were all of average severity, with the usual complications, ranging in temperature from 102 to 105. After a preliminary 10-gr. dose of calomel, creosotal was administered in dram doses night and morning and nitroglycerin given as required. The results were diminution of temperature without cardiac depression, a liquefaction of the exudate, general stimulation of all the emunctories and relief from previously existing pain. All the patients got well by gradual defervescence. He thinks the remedy is worthy of a more extended trial.

134. **Yeast Fungus.**—Three cases of apparent diphtheria are reported by Hickey in which the cultures revealed nothing but yeast cells in two; the other, occurring at the same time though less severe, was not examined. The clinical symptoms were very like those of diphtheria, but there was no very extensive glandular enlargement in any of the cases and practically none at all in two.

136.—See abstract in THE JOURNAL, XXXV, p. 707.

137.—Ibid.

147.—See abstract in THE JOURNAL, XXV, p. 1050.

152. **Caustics in Malignant Disease.**—McGavran believes that caustics have no place in the treatment of cancer of the tonsils, tongue, eyelids, scrotum, penis and rectum, nor would he use them in cancer of the breast or uterine cancer. All objections to caustic treatment disappear when we come to consider cutaneous cancer, and he reports five typical cases of facial eruptions successfully thus treated. The choice of proper escharotics is of great importance. A mild caustic should never be employed. Nitrate of silver and mineral acids should never be employed. Caustic potash, arsenous acid, and chlorid of zinc have given the best results. The one which has given him the best results is Bougard's caustic compound, as follows: Wheat flour, 60 grams; starch, 60 grams; arsenic, 1 gram; cinnabar, 5 grams; sal ammoniac, 5 grams; corrosive sublimate, 0.50 gram, solution of chlorid of zinc at 52 F. .245 grams. The first six substances are separately ground and reduced to a fine powder. They are then mixed in a mortar of glass or china, and the solution of chlorid of zinc is slowly poured in, while the contents are rapidly moved with the pestle, so that no lumps shall be formed. A thick layer is then spread on cotton and left in position from ten to twenty-four hours. If the application has been successful all the macroscopical cancer mass should appear to be necrosed completely and the tissue beyond inflamed. Warm poultices are applied until the slough separates, usually in three days. Few cases require a second application. The ulcer may be dressed with aristol ointment. All exuberant granulations are to be kept in check by the usual methods. It is important to so stimulate the ulcer as not to permit scabs to form. He has used the caustic potash a few times before using Bougard's formula. He has never used Marsden's paste. The patient must be treated energetically and pain not be a preventive. During the application of the caustic he usually gives a hypodermic of morphin every five or six hours, but some cases do not require it.

156.—This article has appeared elsewhere. See THE JOURNAL, XXXV, p. 616.

165.—See abstract in THE JOURNAL, XXXV, p. 1501.

FOREIGN.

British Medical Journal, December 8 and 15.

Parasitology of Malaria. LORD LISTER.—The author reviews the history of the discovery of the origin of malaria from Laveran's first findings of the ameba and Golgi's latter recognition of the tertiary and quartan forms, and the slightly later discovery of the estivo-autumnal parasite. He then gives an account of the deductions of Manson from the findings, and Ross's observations in India, which demonstrated the part that the mosquito plays in the infection. Although this was done, there still remained a link wanting in the chain of biologic sequence. The relation of unpigmented flagella to the pigmented corpuscle was unexplained until MacCallum's observations in this country, when he demonstrated the process of fertilization and that the flagella were nothing more nor less than spermatozoa and the granular cells were ova. The further observations of Koch and Grassi of the life cycle of the parasite, and the observations of Bastianelli and Bignami of the development of crescents, are also noted, as well as the recognition of the anopheles as carrier of the malarial parasite that infects man. Christophers and Stephens have also investigated blackwater fever and the special liability of children to be infected among the natives of malarial regions, with the practical inference from the fact of the advisability of Europeans when

settling in a malarial tropical region separating their dwellings from those of natives, the interval of one-quarter of a mile usually being sufficient to afford a suitable degree of protection.

Causes and Cure of Insomnia. JAMES SAWYER.—The hypnotic drugs are reviewed in this second lecture, and Sawyer insists on the importance of giving such only in exceptional cases and of avoiding them if possible. The risks of the administration of a powerful hypnotic are very serious and many human lives are yearly lost from this cause. He would use them only as temporary remedies when it is necessary to secure sleep at once. The patient should never be allowed to swallow chloral or any other dangerous but valuable hypnotic according to his own free will, nor should he proportionate the dose himself. He can only safely take them under medical supervision. Another important point is that an overworked individual must never be permitted to go on with his overwork and habitually secure sleep by chloral or other drugs. The sleeplessness must be attacked at its cause. Sawyer, however, advises suspicion as to accepting work as the cause of insomnia. It is mostly worry, not overwork, or if work, work under wrong conditions. The general hygienic considerations must not be overlooked. A holiday with complete change of scene and with distinct activities will often do much to cure, and if the patient is well nourished the bromids may be cautiously employed. In the anemic cases a generous diet and alcohol as a hypnotic are sometimes useful, but there is a danger in the prescription of this agent and we must not be negligent of our responsibility. The author notices the various plans of producing sleep, such as counting, thinking of monotonous subjects, taking deep inspirations. He thinks these are occasionally useful, but by no means invariably effective. Care should be taken that the bed-covering is sufficient, but not excessive. In all cases, a window should be open the year round. The head of the bed should be away from the wall. A little food taken just at the time of retiring is often effective. Sometimes a person who has been long awake will fall asleep at once after sousing his head, neck and hands in cold water, or shaking up and cooling his pillows and bedclothes and then going back to bed. In the toxic forms of insomnia we must look after a reduction in the consumption of tobacco, alcohol, tea, etc., as the case may be. The treatment of gouty insomnia and that from chronic kidney disease is too extensive a subject, involving as it does the whole question of therapeutics of the maladies on which the symptom depends, to be discussed here. In the very obstinate senile insomnia the bromids with full doses of hops or henbane are the best drugs, and less harmful methods like some of the non-medicinal measures referred to may bring about sleep.

December 15.

Polyorrhomenitis, or Combined Serous Inflammations. FREDERICK TAYLOR.—In this article Taylor describes conditions which have been specially noticed by the Italians and have received the name of polyorrhomenitis, which include multiple serous inflammations. The name can be compared with that of polyarthritis, by which we mean multiple inflammation of the joints, and in these cases also we have to consider what are its bacteria, or poisons that cause the condition. Polyorrhomenitis may be either acute or chronic, and the causes correspondingly different. In the acute case one cause may be pneumococcic, while the pericardium and pleura are inflamed together; another is the staphylococcic invasion, which we see in pyemia and septicemia. The tubercle bacillus is also a cause in a small number of acute cases, though it plays the greatest part in the chronic and subacute inflammation of the serous membranes, where it is the most frequent cause of all. Polyorrhomenitis is more frequent in males than females. The majority of the cases occur between the ages of 16 and 30. In any case it usually begins in one serous membrane and subsequently invades the others, according to the following three types, of which the first is the most frequent and the last mentioned the least: 1. The peritoneum is first attacked, then the pleura, beginning generally with the right pleura. 2. The pleura, then the peritoneum. 3. The pleura on one side is first invaded, and then the opposite. 4. Pericarditis generally follows a pleurisy, and especially a left-sided pleurisy. 5. The inflammation may first involve one pleura, then the peritoneum, then the other pleura. The interval between the invasion of the different sacs may be weeks or months. The duration is also variable, and the result may be recovery with adhesions, or fatal. While most such cases are tuberculous, the author does not exclude the possibility of an exception and mentions a case in which there was no evidence in the post-mortem to show that tubercle had anything to do with the causation. The prognosis depends largely on the cause. The prognosis of pneumococcal polyorrhomenitis is undoubtedly much worse than the prognosis of pneumococcal pneumonia, or a pneumococcal empyema or pleurisy. An implication of the pericardium is a bad addition to the case. Streptococcal and staphylococcal cases may be fatal, but in the subacute or chronic multiple inflammation due to tubercle the prognosis is much more favorable. Tubercular peritonitis is probably fatal in more than one-half the cases; pleurisy in much less, but the associated lesion is not likely to be less fatal than the more fatal of the two operating alone. The course of tuberculous pericarditis probably renders death almost certain. In case of recovery from all the immediate inflammatory conditions there remains the risk from permanent adhesions, the risk of the development of tubercle in other organs, especially the lungs and meninges. The treatment of the condition must be conducted on the lines of treatment of the separate tuberculous lesions concerned, hygienic food, pure air, climate, relief from cares, etc. Internally as drugs, iron, creosote and cod-liver oil have been administered. As to local measures he has aspirated the left chest and applied mercurial ointment externally. Mercurial inunctions have often seemed to be valuable. Laparotomy may become desirable. Arsenic and iodin are also mentioned.

The Lancet, December 8 and 15.

Prognosis and Treatment in Pulmonary Tuberculosis. ROBERT MAGUIRE.—In this second lecture Maguire continues the subject of the prognosis of tuberculosis. Pyrexia, he thinks, is not so significant; it may be absent, and he does not consider that tubercular poisoning itself often produces pyrexia, but rather that it is due to staphylococcal and pneumococcal poisoning. An increased morning temperature and the nearer the approach to evening temperature the worse the outlook for the patient. General weakening at the commencement of the attack greatly increases the gravity of the case. This is especially so if there is a cardiac or vasomotor weakness. Hemoptysis causes altogether too much alarm, especially in the early stages; it occurs from so many other causes that he says: "I think one may say that hemoptysis alone is most frequently not caused by lung disease." Repeated small hemoptyses are often a relief to an over-congested pulmonary area and a single large hemoptysis without fever is apparently of little importance, but if fever is present it should excite all attention. In the second stage, that of progress, a point that we should look out for is the presence of large bubbling râles indicating formation of cavities which may or may not be detected during life, indicating progress of the germ and extension of its action. Pyrexia alone is not a specially important symptom in these cases. Extension of the tubercular lesions of the lungs may take place in five ways, each of which is discussed: 1, by simple contiguity; 2, by lymphatic absorption; 3, by bronchial insufflation, a matter of greatest importance; 4, by venous conduction; 5, by arterial conduction. The lymphatic absorption undoubtedly plays a great part in the extension of contiguity and it may be carried to remote parts of the body in this way. Bronchial insufflation is much more important, and the extension from the apex to the lower lobes is largely in this way. Venous and arterial conductions are, of course, important and more serious than some of the other methods. Tuberculosis of the larynx is never, he holds, an early condition; it is always produced by infection of the larynx through the excretion of the lungs. The same is true of infection of the bowels through swallowing of sputum; both, of course, are of the gravest prognosis. As regards symptoms, there are only two which greatly help in the prognosis in

the second stage. They are pyrexia and hemoptysis. The former is always present; the higher the fever and more nearly the morning temperature approaches that of the evening, the worse the prognosis; but still worse is the so-called hectic fever, where the subnormal morning temperature is followed by an evening rise of perhaps even 8 degrees. Maguire's experience shows that no drug has any effect on this symptom. Hemoptysis is much more serious in the second stage than in the first, inasmuch as it is more usually caused by ulceration of the blood-vessels. Its dangers are: 1, loss of blood; 2, shock; 3, fright. He has seen cases where this last caused the death. In the third stage we have signs of activity and consolidation, or loss of lung tissue, dyspnea and hemoptysis, which last is a very serious matter. If copious it is most frequently caused by rupture of an aneurysm of the pulmonary artery in a cavity, and he warns against reckless percussion in this stage on account of the possible presence of these aneurysms.

December 15.

Prognosis and Treatment of Pulmonary Tuberculosis. ROBERT MAGUIRE.—The third lecture deals with treatment. First he notices the encouraging resistance of the tissues by feeding, and the open-air treatment, which he thinks is carried to excess at the present time and should be tempered by good judgment on the part of the physician; then he passes to his experiments on producing asepsis of the lungs or destruction of the tubercular germs by injections of glycogen, yeast, cyanid of mercury, taka-diastate and nuclein with some little apparent encouragement with some of these, but the difficulties were very pronounced. He then gives a report of his own experiments with intravenous injection of a weak solution of formaldehyde, which is noticed editorially in this issue of THE JOURNAL. An unpleasant experiment on himself showed that it is dangerous to use a solution of more than 1 in 2000, and the maximum injection should not exceed more than 50 c.c. for an adult. The result of his treatment as elsewhere noticed has been encouraging, but he suggests that if unduly continued the formaldehyde will irritate the lung tissue and increase the symptoms. It is only practice and experience than can show one when to stop the treatment, but as a general rule he thinks it advisable to give up the injections for a few days when the temperature has fallen, when the sputum has become mucous and frothy, and when the cough is unduly troublesome. With regard to the latter he does not see the objection to the judicious use of opium to relieve both the excessive secretion and cough.

Bulletin de l'Academie de Med. (Paris), December.

Treatment of Fracture of Humerus. LUCAS-CHAMPIONNIERE.—As further evidence of the superiority of his method of early massage, without immobilization, Lucas-Championniere exhibited a man of 63 who had been treated for a fracture of the humerus below the deltoid impression, which had occurred a month previously. In spite of a certain degree of deformity there is no pain and the patient can already commence to use his arm. The treatment should be begun from the very first; it is impossible to attain the same results if the massage is not commenced until a few days after the traumatism. The pain and the contractions of the early stage should be prevented.

Neuropathic Hemorrhages of the Digestive Passages. LANCEREAUX.—The mouth, stomach or intestines may be the seat of neuropathic hemorrhage. It may appear consecutive to an emotion and is rarely serious unless by its repetition. There are almost always premonitory symptoms, a sensation of pain and oppression in the epigastrium, and of pain in the lumbo-sacral region or at the anus, genital regions or in the cecum, with general oppression, anorexia, flatulency and pains in the legs. These symptoms are followed by more or less pronounced colic and fluid, blackish stools, with a depression which may terminate in melancholia or syncope. The pulse and respiration become more rapid. These symptoms sometimes increase to such an extent as to become actually threatening, but usually the hemorrhage moderates and the patient recovers his strength. Recurrences are frequent and are sometimes periodical for several years. Opiates are useful by immobilizing the alimentary canal, combined if necessary with ice on the abdomen, injections of ergotin, and if the hemorrhage is from the stomach by the injection of twenty drops of ferric chlorid in solution. Quinin is extremely effective in arresting neuropathic hemorrhage, in doses of from 1 to 1.5 gm. a day. A number of typical cases of neuropathic hemorrhage are described, emphasizing the absence of anatomic lesions in these cases and the neuropathic character, especially in persons with a tendency to gout or rheumatism.

Bulletin Medical (Paris), December 1.

Vasoconstricting Properties of Quinin. HUCHARD.—The lowered arterial pressure that characterizes la grippe explains the beneficial results of the administration of quinin, owing to its power of contracting the vessels. This property renders it useful in various congestive and hemorrhagic conditions, combined with ergot and digitalis in case of hemoptysis or with opium and antipyrin in metrorrhagia with lumbo-abdominal pain which does not yield to ergot. Paulesco has reported two cases of exophthalmic goiter very favorably influenced by 1 gm. of quinin a day, and Soulier has had a similar experience with two cases treated with .75 gm. a day for a month. Huchard has been treating six cases of this disease with quinin hydrobromate for several months, 1.5 gm. a day during the first week, 1 gm. during the second, and .5 gm. during the third, and then recommencing with 1.50 gm. The results attained in four of the six cases have been extremely encouraging. Quinin is also very useful in aortic insufficiency with violent pulse-beat in the arteries of the neck and with nervous symptoms. He has also derived great benefit from it in thirty cases of what he calls "orthostatic" tachycardia, the disturbances in the circulation appearing only when the subject stands, diminish as he sits, and vanish completely when he reclines. The vascular system is relaxed and the heart contracts the more rapidly the more easily it is emptied. Ergot is ineffective in these cases.

Bull. de la Soc. Med. des Hop. de Paris, November 29.

Puerperal Phlebitis. STAPFER.—A slight, persisting subfebrile condition after childbirth is a warning of approaching phlebitis. In a case described, it continued for six to seven days when the temperature rose apparently to normal for ten days. Fever then returned and phlebitis of one of the lower limbs became evident, involving later the other limbs. After fifteen days of fever and phlebitic symptoms the fever rose to 41 C. and accompanied by intense headache and nervous symptoms. A course of frequent and prolonged tepid baths gradually restored conditions to normal, the patient becoming convalescent on the fifteenth day. These prephlebitic and postphlebitic symptoms are evidently due, like the phlebitis itself, to migration of microbes or toxins.

Revue Hebd. de Laryngologie (Bordeaux), November 10 and 24.

Primary Tuberculosis of the Larynx. S. BERNHEIM.—The larynx is more frequently the seat of primary localization of tuberculous infection than is generally appreciated. Bernheim has observed twenty-nine cases of this condition, and remarks that it can be differentiated by the small miliary vesicles which break and unite to form shallow, irregular flat ulcerations which invade almost the entire organ. The slow progress and the general phenomena distinguish it from primarily inflammatory laryngitis. He has sometimes injected tuberculin to aid in the diagnosis. It produces a harmless local pathognomonic reaction. The proper treatment aims to make the organism strong enough to live with the bacilli without suffering from their inroads. Fresh air, rest and food produce unexpected results and should be the base of all treatment of primary laryngeal tuberculosis. In the first stage phenic and lactic acid are the best local remedies, and in the other stages sprays or inhalation of phenic acid, repeated at least four times during the day. Senesse prescribes the following solution for the purpose: Phenic acid, 30 to 60 cgm.; cherry-laurel water, 20 gm.; potassium bromid or borax, 2 to 3 gm.; neutral glycerin 30 gm.; aq. dest. 300 gm.

November 24.

Operative Treatment of Scleroma. E. DE NAVRATIL.—Scleroma is more frequent in the eastern portion of central

Europe than in the west, especially in Hungary, Roumania, etc. Navratil does not allow himself to be deterred from operating by the advanced condition of the lesion, and reports several cases completely cured without recurrence by excising all the invaded regions and far into sound tissue, with subsequent autoplasty. He also describes a case which—unoperated—progressed to fatal involvement of the upper air-passages.

Ether in Laryngeal Tuberculosis. L. VACHER.—Intratracheal injections have been found by the writer very effective in treating tuberculosis of the larynx, especially in the ulcerative stage, in which there is usually much pain, a rebellious cough and laryngeal spasm. To control these symptoms and treat the lesion, he has found the following formula most satisfactory, after innumerable trials of various substances for these intratracheal injections. Ether with iodoform to saturation, 100 c.c.; guaiacol, 5; eucalyptol, 2; and menthol, 1, injecting 2 c.c. at a time. The patients all prefer the solutions made with ether as much more agreeable than when any other vehicle is employed. There is no spasm of the glottis, probably because the gas generated in the trachea forces it open. The improvement is unmistakable, both local and general, after a course of these intratracheal injections.

Semaine Medicale (Paris), December 5.

Plastic Linitis. BRISSAUD.—In the fibrous or fibroid tissue which forms the compact mass of the hypertrophied pylorus in this affection, there are always strips of epithelioid cells whose nature is still disputed. Some insist that they are metatypical elements, others that they are cancerous or that they are merely lymphatic endothelium and that the process is therefore an inflammatory tumefaction. The affection is first manifested by dyspepsia, with characteristics resembling those attributed to chronic gastritis. The morning mucus is exceptional, however, and when vomiting occurs, the food is seen to be largely digested. The vomiting is not always of food, as long as the syndrome of stenosis of the pylorus is not complete. The general health becomes rapidly modified from the very first, in spite of the good appetite and persistence of gastric digestion. The extreme pallor without hematemesis or melena suggests the anemic form of cancer. The legs are edematous, but the debility is not proportional to the cachectic appearance. A tumor soon appears at the pylorus; this is not knobby nor definitely limited, but it feels like a simple thickening of the stomach wall. The stomach is not dilated and sometimes is even retracted, especially in total linitis accompanied by retroperitonitis. The tumor always retains its primary site. A case is described in detail, treated by pylorectomy which restored the patient as if by magic. In nineteen days he had gained 1.2 kg. In another week, 2.1 kg. additional and by the end of four or five months he had gained a total of 10.62 kg.

Berliner Klin. Wochenschrift, November 26.

Treatment of Septic Infection Proceeding from the Uterus. ABEL.—Bacteriologic examination is of great importance and should be the guide in treatment. Irrigation of the uterus is of very little value, as the fluids do not penetrate into the tissue. Atmokausis is preferable—cauterization with steam. Abel relates instances in which the temperature fell to normal after exposure of the inner surface of the uterus to the action of steam at 110 C. for thirty seconds. The eschar formed was expelled later almost entire. He advocates atmokausis always as a last resort before proceeding to extirpation, reserving the latter for cases of infection in which there are extensive lacerations of the uterus. Extirpation transforms the dangerous lesion into a smooth wound with a prospect of healing. Infusion of salt solution and inhalation of oxygen are valuable adjuvants.

Centralblatt f. Chirurgie (Leipsic), December 8.

Improved Drill. P. MEISEL.—The grooves in the ordinary drill soon fill up with bone dust. Meisel overcomes this difficulty by making his drill as if it were two cutting knives rotating above a dura protector. By holding the drill obliquely a flat bone can be cut through at any angle or in an arc. Kraske has been using this drill in resecting the jaw and trephining for two years. A trephine flap cut with sloping edges fits back in place so perfectly that the patient can lie on it without trouble even from the first.

Cbl. f. Gyn. (Leipsic), October 27 and November 24.

Complete Rupture of the Uterus. K. J. F. BAUR.—In a case reported by Baur the spontaneous rupture was complete; fever and hemorrhage were slight, but there was considerable collapse. The dead fetus was extracted with forceps and the placenta found among the intestinal loops by following the cord with the hand. The ruptured uterus and the vagina were merely tamponed and the patient recovered without further treatment. When dismissed a month later, the uterus was in normal involution. It was retroflexed but readily straightened. No adhesions could be felt. A cicatrix extended along the posterior right vaginal wall. There was a gap in the cervix the width of the finger and it continued up in the broad ligament for 7 cm. Abstention from surgical intervention, even from local irrigation, permitted all the physical forces to be concentrated on the repair of the lesion and to this Baur attributes the favorable results of conservative treatment in such cases.

November 24.

Chorio-epithelial Vaginal Tumors. H. SCHMITT.—In the last three years cases have been reported of multiple, true chorio-epitheliomata in the vagina, lungs, liver and intestines with no primary tumor in the uterus. Schlagenhaufer has recently observed a case in which a chorio-epithelioma of the vagina was removed nine months after an abortion, with complete recovery. Schmitt reports a similar case operated on at Schauta's clinic. Two malignant chorio-epitheliomata had developed in the vagina, first noticed three months after the spontaneous expulsion of a hydatid mole with only a few days of fever but considerable hemorrhage, almost continuous for six weeks and recurring twice afterward for a few hours. One tumor was the size of an egg and the other of a nut when removed two months later. The general health was good and the uterus appeared normal. As curettement disclosed only ordinary interstitial endometritis, the uterus was left undisturbed. The patient has been examined every few weeks during the past eight months and seems normal in every respect. The malignant neoplasms in the vagina probably developed secondarily from normal villi deposited at this point during delivery. It is possible that this villous tissue may be carried to other organs by the blood, but perishes there from lack of a suitable soil.

Cbl. f. Inn. Med. (Leipsic), November 17, 24, and December 1.

Bacteriology of the Blood in Pneumonia. A. PROCHASKA.—Pure cultures of the pneumococcus were derived from the blood of each of ten cases of pneumonia tested at Eichhorst's clinic. Four terminated fatally; the remainder recovered, with empyema in one case and unusually slow absorption in some of the others. Nephritis and gangrene of the lungs occurred in three of the fatal cases.

November 24.

Action of Distillate of Coffee and Tea on Respiration and Heart. C. BINZ.—From eighteen tests on man and three on dogs, Binz concludes that the distillate of roasted coffee—free from caffein—has a marked effect, temporarily increasing the number of respirations. Muscular agitation and slight psychic excitement were also noted. The distillate of tea produced similar, but less pronounced, effects.

December 1.

Treatment of Senile Pruritus. A. JAENICKE.—Systematic brushing with a soft brush will remove the dead epithelium cells from the surface of the skin, which Jaenicke thinks is frequently the cause of senile pruritus. The skin can be moistened with alcohol to enhance the effect during the first two days, or lard or lanolin can be used for the purpose. Vaselin is less effective. Warm baths soften the epidermis and annul the effects of the brushing, which should be done for ten to twenty minutes at a time, three times a day at first, gradually diminishing to once in two days. This treatment has

always relieved the pruritus and frequently abolished it for several months at a time.

Cbl. f. Nerv. u. Psych. (Breslau), October.

Hypothermia in Epilepsy. C. CENI.—In twelve out of twenty epileptics Ceni has examined, the temperature fell to 36, 35, and even 34 C. at times, the hypothermia persisting for thirty to sixty minutes. In some cases it recurred several times during the twenty-four hours, but usually appeared after periodical intervals of a few days or weeks, but at irregular hours. In some patients, however, it reappeared with an intermittent character at about the same hour. There did not seem to be any connection between the hypothermia and the number or violence of the seizures, but in a few cases it preceded a seizure by an hour or two. He considers this hypothermia another point in favor of the autotoxic nature of epilepsy.

Deutsche Med. Wochenschrift (Leipsic), December 6.

Typhoid Bacilli in the Blood. M. AUERBACH.—By the technique described, Eberth's bacillus was discovered in the blood in seven out of ten cases of typhoid fever of varying severity. Differentiation was possible in some instances in thirty-six hours. About 300 c.c. of meat bouillon in an Erlenmeyer jar were sown with 10, 20 or 30 drops of blood from the median vein and shaken. Hanging-drop cultures made in eighteen to twenty-four hours afterward were sometimes successful, but in other cases the jars required replacing in the oven for twenty-four more hours. By this means characteristic cultures could be obtained on agar, milk, grape sugar and bouillon and the eight-hour bouillon culture proved a fine test for the agglutinating properties. In one case an uncertain diagnosis was confirmed by the results of this test of the blood. It is as simple a procedure as the agglutinating test and is decisive if positive.

Neurologisches Centralblatt (Leipsic), November 1 and 15.

Electric Stimulation After Decapitation. A. HOCHE.—Hoche's electric tests of decapitated criminals have already been mentioned in THE JOURNAL. He has since had opportunity for research on two more subjects, commencing two minutes after the knife had fallen, and it confirms his previous views. He finds that there is no independent excitability to the faradic current on the part of the motor fibers in the tracts. The effects which follow electric stimulus are due either to stimulation of the roots or to reflex mediation. By graduating the amount of the stimulus, these latter forms can be differentiated. Weak stimulation of the anterior and lateral columns of the cord induces contraction on the same side, and stronger stimulus, symmetrical contraction on the other side. Weak stimulation of the posterior columns produces a symmetrical response in the plane of the point of excitation. The question of the localization of the ganglion cells for the nerves of the upper extremity can probably be determined by isolated stimulation of the anterior roots, which he proposes to undertake on the next occasion.

November 15.

Brachial Neurosis from Diseased Tooth. F. HESSE.—A tooth which had been filled six years before was not particularly painful and appeared sound, but both jaws were tender and violent pains radiated through the shoulder, breast and arm, with paralytic symptoms. Extraction of the tooth, which proved to have a necrosed pulp, completely cured the neurosis in the cervical and brachial plexuses which had resisted all treatment for a year.

Wiener Klinische Rundschau, November 25.

Cerebral Bladder Disturbances. E. VON CZYHLARZ AND O. MARBURG.—In this communication, based on observations at Nothnagel's medical and Obersteiner's neurologic clinics, the writers announce that bladder disturbances may exist in the course of cerebral affections with an otherwise sound nervous, muscular and glandular bladder apparatus, and without clouding of the consciousness. Unilateral lesions of the motor zone of the cortex caused disturbance of the bladder function, as was shown in an inability to voluntarily void urine. No bilateral lesions came under observation. The surprising fact was also noted that the subcortical cerebral centers seem to have a certain influence on the bladder. In several cases of lesions of the corpus striatum, there was incontinence of urine, but in a case of bilateral, total destruction of the thalamus, there were no bladder disturbances, although the knee reflexes were abolished.

Connection Between Lithiasis and Hard Water. J. PREINDLSBERGER.—The writer has been making an extensive study of lithiasis in Bosnia and gives a map showing that all of the 176 cases of lithiasis he has been able to collect, occurred in a central district stretching through the country, corresponding to a certain geological foundation, consisting essentially of lime.

Wiener Klinische Wochenschrift, November 29.

Plea for More Extensive Operating in Carcinoma Uteri. E. WERTHEIM.—During the last two years Wertheim has been having many sections made of the glands and parametrium in every case of cancer of the uterus that came to operation, 33 in all. In 11, some of the glands in the region were found invaded by the carcinoma, including five in which the neoplasm had been supposed to be in its earliest stage. That is, in 26 cases of operable carcinoma of the cervix the glands were found involved in 20 per cent. In one case, a commencing cancroid of the portio, a cancerous gland about the size of a cherry, was found close to the right external iliac vein. No traces of cancer could be discovered in any of the other glands nor in the parametrium. In another case, a circumscribed nodule on the posterior lip of the portio vaginalis was accompanied by a cancerous gland, the size of a hen's egg, on the left external iliac vein. In the third case the cervix was entirely cancerous and a cancerous gland was found close to the right uterine vein. In the fourth, the cervix was cancerous, and the parametrium and neighboring glands were normal, but at the point where the left ureter crosses the common iliac, a cancerous gland the size of a cherry was found. In the fifth, a narrow strip of cancerous tissue in the right parametrium led to a very large cancerous gland adherent to the external iliac vein. Cancerous fibers and nests were found several times in the parametrium, when to the eye and touch it seemed perfectly normal. Wertheim considers these findings important testimony to the necessity of extirpating the glands in the vicinity and the parametrium in all cases. His technique includes exposing and liberating the ureters and the iliac blood-vessels. The glands are carefully sought for along the vessels and excised, up to the fork of the abdominal aorta, and the parametrium and paravaginal cellular tissue are extirpated with the uterus and the upper portion of the vagina. Omitting light inoperable cases, he has had three die out of 25 patients operated on, one from invagination of the small intestine, the others from peritonitis. The remainder recovered and have shown no signs of recurrence to date. The operation requires seventy-five to ninety minutes. The ureters are easily isolated unless fixed by inflammatory processes. The vessels are readily exposed. Hemostasis has to be applied to even the smallest ramification of the veins and trained assistance is necessary. Provisory ligature of the hypogastric artery was of no appreciable benefit. The extirpation of the glands is difficult only when they are adherent to the vessels. In future, he remarks, it may be possible to restrict the extirpation to those glands alone which are tumefied, as in none of his sections were traces of carcinoma to be found in the normally small glands. The general health and the state of the heart should be carefully weighed before attempting intervention. If these are favorable, unexpectedly gratifying results may be attained.

Differential Diagnosis Between Tubercular and Syphilitic Processes. P. BAUMGARTEN.—In a syphilitic process the small fibroblasts only exceptionally attain the size and the number of nuclei of the tubercular epithelioid cells. They are also regularly distributed and covered with leucocyte infiltration and the capillaries are prominent. In a tubercular process, the cells are clumped and without leucocyte infiltration and the presence of even a single giant cell tips the scale of probability. The vessels also soon disappear. Cicatrization occurs only after a caseous degeneration. In a syphilitic proc-

ess the connective-tissue metamorphosis frequently appears before the gummatous necrosis, which proceeds much more slowly to complete destruction of the parts. The contour of the original structure may be perceived through the veil of gummatous mortification, while in tubercular processes the original structure soon vanishes completely. In the testicles the syphilitic process begins in the interstitial tissue and only secondarily invades the walls of the seminiferous tubules, while the reverse course is observed in a tubercular process. It usually occurs first in the epididymis and spreads through the rete testis to the seminiferous tubules. In only two cases on record were the latter the primary site of tubercular affection. Virchow has also observed a primary interstitial tubercular process in the testis, most common in young boys with general miliary tuberculosis. Another point in differentiation is that a syphilitic process induces degenerative changes in the epithelium of the tubules, while in a tubercular there is always pathologic proliferation.

The Ganglia of the Abdominal Wall in Peritonitis. M. ASKANAZY.—The ganglia are not as usual woven closely into the tissues, but are surrounded by a space which is seen to be the dilated sheath, filled with a lymphatic fluid. The ganglia are compressed and displaced by the pressure of this fluid and this is probably a factor in the intestinal paralysis which frequently accompanies peritonitis.

Change of Address.

E. Brown, 15th and Dodge Sts., to 1026 Park Ave., Omaha, Neb.
G. P. Bearman, Symerton, Ill., to Bowbells, N. D.
H. T. Crabtree, Chicago, to 3760 California St., San Francisco, Cal.
J. H. Carpenter, 412 Cleveland Ave., to 535 Willand St., Chicago.
G. S. Darby, 661 W. Adams St., to 79 Seeley Ave., Chicago.
R. C. Dryden, Winslow, Ariz., to Capitan, N. M.
J. W. Evinger, Paris, to Elbridge, via Paris, Ill.
E. M. Holmes, Bradyville, to Readyville, Tenn.
E. H. Hawkins, Denver, to Leadville, Colo.
H. F. Hewitt, Grand Island, Neb., to Hawarden, Iowa.
Geo. M. Kober, 1819 Q St., N. W., to 1600 T St., N. W., Washington, D. C.
Anna Lukens, La Pintoresca Hotel, to 427 Marengo Ave., Pasadena, Cal.
F. H. Lukin, Leesville, to Marysville Va.
P. E. McDonald, Fort Yates, N. D., to General Delivery, New York City.
E. J. Miller, Dickinson, N. D., to Ashton, Ill.
A. E. Miller, Boston, to Needham, Mass.
W. J. Nier, Palmyra, Wis., to 608 W. 58th St., Chicago.
G. B. Pearson, Newport News, Va., to Middletown, Del.
J. Sjoquist, Holdrege, Neb., to U. S. Consulate, Shanghai, China.
J. G. Smith, 579 E. 12th, to 519 E. 12th St., Kansas City, Mo.
Robt. Sattler, Biddeford Pool, Me., to The Groton, Cincinnati, O.
E. A. Timmons, Godwin, to Columbia, Tenn.
C. S. Venable, Carlton and Regent Sts., to Brown-Shipley & Co. Bankers, London, England.
Ben Webster, Cassopolis, to Alamo, Mich.
W. S. Whitwell, San Mateo, Cal., to Fishkill Landing-on-the-Hudson, N. Y.
A. L. Walker, Memphis, Tenn., to Plevna, Ala.
Wm. F. Wegge, 693 Cass St., to 82 Wisconsin St., Milwaukee, Wis.

Queries and Minor Notes.

MUSCLE-TRAINING OF INFANTS.

CORTLAND, N. Y., Dec. 17, 1900.

To the Editor:—Will you please give me the title of a good manual on the muscle-training of infants? What I need is for a child 3 years old that does not co-ordinate properly. F. W. H.

ANS.—We do not know of any special work on the muscle-training of infants or very young children, nor of any one dealing specially with that subject. We believe that the natural play of children is usually the best muscle-training exercise, though in special cases the treatment for imperfect co-ordination would have to be managed on different principles, recognition being taken, of course, of the underlying condition, which may be one that will effect the prognosis.

MEDICAL-PRACTICE LAW.

WAUSAUKEE, WIS., Dec. 24, 1900.

To the Editor:—Would you kindly publish, or tell me where I may find, the requirements for registration for practice in the state of Michigan, and also name and address of the secretary of the State Board of Examiners? Respectfully, R. C. A.

ANS.—The requirements in Michigan are a diploma from a recognized medical college, or examination. The board of examination is rigid in its scrutiny of medical colleges. A list of colleges recognized by the board can probably be obtained from the secretary, Dr. B. D. Harison, Sault Ste. Marie, Mich.

A HOME FOR PHYSICIANS.

BRISTOL, TENN., Dec. 11, 1900.

To the Editor:—I write for information as to a matter to which my attention has been called recently and that is to a proposition to build a physicians' home in some part of the United States in the near future. Please let me know if there is such a movement on foot and by whom the movement is projected. I have been asked to find something about the matter, and hence I make inquiry of you. G. M. P.

ANS.—We do not know of any such project being under consideration. Possibly some of our readers may be able to enlighten us.

CALL OF COURTESY.

ROANOKE, VA., Dec. 21, 1900.

To the Editor:—I desire to ascertain whether it is customary for a medical practitioner who has just recently located in a city to call on his brother medical men first as an act of courtesy, or should he wait until the first call is made by them? I do not think our Code of Ethics makes any mention of this: at least the one I have (written by Prof. Austin Flint in 1893) is silent on the subject. "The Physician Himself," by Cattell, makes some mention of the subject, but it is not quite clear. Your immediate reply will serve toward settling a lively dispute on the subject.

Fraternally yours, B. C. K.

ANS.—While there is no written law governing the subject, there is an unwritten one that a medical practitioner locating in a city shall call on the other physicians and announce that he is locating among them, and in that way intimate that he desires their recognition.

INTRA-ABDOMINAL TORSION OF THE OMENTUM.

NIAGARA FALLS, N. Y., Dec. 19, 1900.

To the Editor:—Referring to your editorial in THE JOURNAL of Dec. 15, 1900, page 1558, concerning intra-abdominal torsion of the omentum, I would ask if you could kindly give me some literature on this condition. I have now under my care a case in which I diagnosed some time ago chronic torsion of the omentum, and I hope to be able soon to confirm my diagnosis by an operation. As I intend to publish the case, owing to its interest to the profession, your kind help in collecting the literature would be greatly appreciated. C. G. LEO-WOLF, M. D.

ANS.—The following references are given by Dr. Wiener in his article in the *Annals for Surgery* for November, 1900:

Max Oberst: Zur Casuistik d. Bruchschnittes nebst Bemerkungen über Netzeinklemmungen. Centralbl. f. Chirurgie, 1882.

Mayd: Ueber Retrograde Incarceration d. Tuba u. d. Processus Vermiformis, etc. Wiener Klin. Rundschau, 1894.

Kukula: Ueber Retrograde Incarceration eines Gestielten Tumors des Dünndarms. Wiener Klin. Rundschau, 1895.

Carl Bayer: Retrograde Netzincarceration mit Stieltorsion über d. Bruchring. Centralbl. f. Chirurgie, February, 1900.

C. H. Peck: Specimen of Intra-abdominal Omental Torsion. Medical Record, March 3, 1900.

Hochenegg: Ein Fall Intra-abdominaler Netztorsion. Wiener Klin. Wocheuschrift, March 29, 1900.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., Dec. 13 to 19, 1900, inclusive:

Charles H. Andrews, acting asst.-surgeon, leave of absence from the Department of California extended.

John E. Bacon, acting asst.-surgeon, relieved from duty at Fort Du Chesne, Utah, to proceed to Fort Grant, Ariz., and report by telegraph to the surgeon-general for annulment of contract.

Lawrence C. Carr, major and surgeon, Vols., leave of absence granted.

Harold W. Cowper, acting asst.-surgeon, from Fort Ontario, N. Y., to San Francisco, Cal., for duty with troops en route to Manila, P. I., and subsequent assignment in the Division of the Philippines.

William D. Crosby, captain and asst.-surgeon, U. S. A., to report to the president of the examining board, Army Medical Museum, Washington, D. C., for examination for promotion.

Richard M. Fletcher, Jr., acting asst.-surgeon, leave of absence from the Department of Dakota extended.

Timothy F. Goulding, acting asst.-surgeon, on the expiry of his present leave of absence, to proceed from Boston, Mass., to San Francisco, Cal., for duty with troops going to Manila, P. I., and for subsequent assignment in the Division of the Philippines.

George B. Lawrason, lieutenant and asst.-surgeon, Vols. (recently appointed with rank from Nov. 19, 1900), is assigned to the 11th U. S. Cav., Vols.

James H. McCall, acting asst.-surgeon, from Fort Schuyler, N. Y., to San Francisco, Cal., for duty with troops going to Manila, P. I., and for subsequent assignment in the Division of the Philippines.

Adrian S. Polhemus, captain and asst.-surgeon, U. S. A., to report to the president of the examining board, Army Medical Museum building, Washington, D. C., for examination for promotion.

Earle H. Sargent, acting asst.-surgeon, from Fort Casey, Wash., to duty at Camp William H. Osborne, Idaho.

Jesse P. Truax, acting asst.-surgeon, from Camp William H. Osborne, Idaho, to post duty at Fort Casey, Wash.

Compton Wilson, acting asst.-surgeon, from London, Ont., Canada, to San Francisco, Cal., for duty with troops en route to Manila, P. I., and for subsequent assignment in the Division of the Philippines.

Navy Changes.

Changes in the Medical Corps of the Navy for week ending Dec. 22, 1900:

Asst.-Surgeon R. E. Ledbetter, detached from the *Constellation* and assigned to the *Monongahela*.

Asst.-Surgeon J. A. Murphy, detached from the *Solace* and assigned to the *Don Juan de Austria*.

Asst.-Surgeon Jacob Stepp, detached from the *Solace* and assigned to the Cavite naval station.

Asst.-Surgeon M. V. Stone, detached from the *Yosemite* and assigned to the *Isla de Luzon*.

Asst.-Surgeon J. C. Thompson, detached from the Navy Hospital, Cavite, P. I., and assigned to the *Solace*.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended Dec. 20, 1900:

Surgeon George Purviance, to report at Washington, D. C., for temporary duty.

Surgeon H. W. Sawtelle, granted leave of absence for thirty days from Jan. 20, 1901.

Surgeon J. H. White, bureau letter of Oct. 11, 1900, granting Surgeon White leave of absence for thirty days amended so that said leave shall be for twelve days only.

Surgeon P. M. Carrington, granted leave of absence for thirty days on account of sickness. Relieved from duty at Washington, D. C., and directed to proceed to Fort Stanton, N. M., and assume command of the service, relieving P. A. Surgeon J. O. Cobb.

P. A. Surgeon J. O. Cobb, relieved from command of service at Fort Stanton, N. M., and directed to report to medical officer in command for duty.

P. A. Surgeon M. J. Rosenau, upon completion of duty at Paris, France, to rejoin station as director of Hygienic Laboratory, Washington, D. C.

Asst.-Surgeon John McMullen, relieved from duty at Tortugas quarantine, and directed to proceed to Savannah, Ga., quarantine station for temporary duty.

Asst.-Surgeon W. A. Korn, granted leave of absence for seven days from Dec. 24.

Junior Hospital Steward E. T. Olsen, granted leave of absence for ten days from Dec. 22.

APPOINTMENT.

A. C. Fraser, of Wisconsin, appointed acting asst.-surgeon for duty at the port of Manitowoc, Wis.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Dec. 21, 1900:

SMALLPOX—UNITED STATES.

District of Columbia: Dec. 15, 5 cases.
Illinois: Chicago: Dec. 8-15, 2 cases.
Kansas: Wichita, Dec. 8-15, 11 cases.
Kentucky: Lexington, Dec. 8-15, 2 cases.
Michigan: Detroit, Dec. 8-15, 2 cases.
Minnesota: Minneapolis, Dec. 8-15, 7 cases.
Nebraska: Omaha, Dec. 1-8, 3 cases.
New Hampshire: Manchester, Dec. 8-15, 22 cases.
New Jersey: Jersey City, Dec. 8-16, 1 case.
New York: New York, Dec. 15, 15 cases.
Ohio: Ashtabula, Dec. 8-15, 2 cases; Cleveland, Dec. 8-15, 37 cases; Portsmouth, Dec. 8-15, 2 cases.
Pennsylvania: Erie, Dec. 15, 5 cases.
South Carolina: Greenville, Dec. 8-15, 2 cases.
Tennessee: Memphis, Dec. 8-15, 1 case.
Texas: Houston, Dec. 15, 18 cases.
Utah: Salt Lake City, Dec. 8-15, 40 cases, 1 death.
West Virginia: Wheeling, Dec. 15, 8 cases.
Wisconsin: Milwaukee, Dec. 8-15, 1 case.

SMALLPOX—FOREIGN.

Bohemia: Prague, Nov. 24-Dec. 1, 46 cases, 1 death.
Brazil: Pernambuco, Nov. 15, 16 deaths; Rio de Janeiro, Oct. 16-31, 43 deaths.
Egypt: Alexandria, Nov. 27, 3 cases, 1 death.
England: London, Nov. 24-Dec. 1, 14 cases, 1 death; Sunderland, Dec. 1, 1 case.
France: Paris, Dec. 1, 17 deaths.
Gibraltar: Nov. 25, 1 case.
Greece: Athens, Dec. 1, 2 cases.
India: Calcutta, Nov. 3-15, 8 deaths.
Mexico: Mexico, Dec. 2, 1 case; Tuxpan, Dec. 3-10, 3 deaths
Russia: Moscow, Nov. 17-24, 3 cases, 1 death; Odessa, Nov. 24, 62 cases, 15 deaths; St. Petersburg, Nov. 24, 5 cases, 2 deaths; Warsaw, Nov. 24, 25 deaths.
Scotland: Glasgow, Dec. 7, 45 cases, 1 death.
Spain: Corunna, Nov. 3, 2 deaths; Valencia, Dec. 2, 1 case.

YELLOW FEVER.

Brazil: Rio de Janeiro, Oct. 16-31, 2 deaths.
Mexico: Vera Cruz, Dec. 8, 2 deaths; Yucatan, Nov. 30, 1 death.

CHOLERA.

India: Bombay, Nov. 13-20, 7 deaths; Calcutta, Nov. 3-15, 35 deaths; Madras, Nov. 10-16, 2 cases, 1 death.
Straits Settlements: Singapore, Nov. 3, 6 deaths.

PLAGUE—FOREIGN AND INSULAR.

Brazil: Rio de Janeiro, Oct. 16-31, 9 deaths.
India: Bombay, Nov. 13-20, 125 deaths; Madras, Nov. 10-16, 1 death.
Philippine Islands: Manila, Nov. 3, 3 cases, 1 death.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

61 Market Street : : Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

Postage in the United States and Canada, Mexico, Hawaii, Guam, Porto Rico, and the Philippines, free; foreign postage, $2.50. Subscriptions may commence at any time. Volumes begin with the first issue of January and of July.

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